

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA**

**D.A. NOLT INC.,**

*Plaintiff,*

Y.

**THE PHILADELPHIA MUNICIPAL  
AUTHORITY *et al.*,**

### *Defendants*

## CIVIL ACTION

**No. 18-4997**

## FINDINGS AND CONCLUSIONS

PRATTER, J.

DECEMBER 21, 2021

The City of Philadelphia engaged D.A. Nolt Inc. to perform roof and roof-related renovation and construction work on a project planned for a relocated City police headquarters. Nolt contends that the City breached the parties' contract to Nolt's economic loss, and the City counterclaims with allegations that Nolt was the breaching party. After Nolt filed suit in November 2018, the parties engaged in a lengthy period of discovery. The Court presided over a non-jury trial between June 14 and July 14, 2021. The parties submitted their respective proposed findings and conclusions. The Court has reviewed the parties' submissions and the transcript of the trial. The Court's Findings, Conclusions, and Order follow.<sup>1</sup>

## FINDINGS OF FACT

## I. The Project and the City's Award of the Contract to Nolt

1. In early 2012, the City publicly announced its decision to relocate the police headquarters from 750 Race Street in Philadelphia to a building located at 4601 Market Street in Philadelphia (“Property”) after renovations to the Property were complete. Stip. Facts ¶¶ 1–2, Doc. No. 60.

<sup>1</sup> Because this case involves many people and entities, a list of them, together with convenient abbreviated names, their Project roles, and other references used in these Findings and Conclusions, is appended to this document.

2. Once renovations were complete, the Property was to be known as the Public Safety Services Campus to house the police headquarters, medical examiner's office and morgue, and the laboratory services for the Department of Public Health. Stip. Facts ¶¶ 3–4.
3. Prior to the events pertinent to this litigation, the Property was in a severely deteriorated condition, with broken windows and water leaks that had stained floors and ceilings and caused plaster damage throughout the building. TD1 Tr. at 54, *l.* 6 to pg. 56, *l.* 2;<sup>2</sup> Ex. P-238 at 3–12.
4. Leaks in multiple locations of the Property allowed water penetration into the building. TD4 Tr. at 103, *l.* 15 to pg. 104, *l.* 4.
5. The Property had 16 separate roofs identified as Roof Areas 1 through 16.
6. To complete the renovation work on the Property, the City divided the proposed necessary work into three (3) phases. Stip. Facts ¶ 5.
7. Phase I primarily involved demolition, electrical, and asbestos abatement. TD1 Tr. at 36, *l.* 9–11; Stip. Facts ¶ 6.
8. Phase II (about which this litigation is primarily concerned) involved the restoration of the building exterior façade, including masonry work, window replacement, door

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<sup>2</sup> The following abbreviated references are used:

TD1 Tr. = Transcript from Trial Day 1 on June 14, 2021  
TD2 Tr. = Transcript from Trial Day 2 on June 15, 2021  
TD3 Tr. = Transcript from Trial Day 3 on June 16, 2021  
TD4 Tr. = Transcript from Trial Day 4 on June 23, 2021  
TD5 Tr. = Transcript from Trial Day 5 on June 25, 2021  
TD6 Tr. = Transcript from Trial Day 6 on July 6, 2021  
TD7 Tr. = Transcript from Trial Day 7 on July 8, 2021  
TD8 Tr. = Transcript from Trial Day 8 on July 9, 2021  
TD9 Tr. = Transcript from Trial Day 9 on July 12, 2021  
TD10 Tr. = Transcript from Trial Day 10 on July 14, 2021.

replacement, some additional or other asbestos abatement in connection with existing windows, installation of structural steel, and replacement of most of the roofing, in addition to certain plumbing work such as the installation of roof drains and related piping. TD1 Tr. at 36, *l.* 14 to pg. 37, *l.* 1; Stip. Facts ¶ 8.

9. Phase III was to involve the fit-out of the existing building, the construction of an addition, installation of the combined utility power plant, and exterior improvements to the parking lots and lights. Stip. Facts ¶ 9.
10. Phase III was likely to be approximately 12 times larger in both scope and cost than Phase II.
11. The City's Project Manager for the Project was Pedro Pinto. Ex. D-1 at 12. Mr. Pinto was involved in all three phases of the Project, including the design of Phase III. TD6 Tr. at 161, *l.* 24 to pg. 162, *l.* 12. On average, Mr. Pinto was onsite during Phase II approximately once a week. TD8 Tr. at 40, *l.* 14–22. He testified that he reviewed only the first few monthly reports, though they were provided to him on a monthly basis throughout his tenure on the Project. TD7 Tr. at 127, *l.* 3–11; 128, *l.* 5–9.
12. The City's Project Director for the Project was James (Jim) Lowe. Ex. D-1 at 12. Mr. Lowe was not onsite every day or involved in the day-to-day Project construction activities. TD9 Tr. at 95, *l.* 22 to pg. 96, *l.* 2. As Project Director, Mr. Lowe reviewed invoices submitted by the City's vendors and payment applications submitted by Nolt.
13. The Project architect was the Ballinger Company. Ex. D-1 at 12. Ballinger, in turn, retained Klein & Hoffman as a sub-consultant to design the roofing system and to specify the manufacturer for the roofing materials. As such, Klein & Hoffman was the City's roofing consultant for the Project. TD2 Tr. at 78, *l.* 5–7; TD1 Tr. at 47, *l.* 18–23.

14. Brent Ellman was a Ballinger structural engineer responsible for the day-to-day design documentation and construction administration of the structural steel work required for Phase II. TD7 Tr. at 4, *l.* 2, pg. 5, *l.* 6–14.
15. Ballinger was also the designer and project architect for Phase III.
16. Mr. Pinto was Ballinger’s point-of-contact for the City. TD6 Tr. at 162, *l.* 13–16.
17. The City hired the Daniel J. Keating Company as its Construction Manager. Ex. D-1 at 12. Keating employed Craig Hunt, the Project Director, and Joe Brasberger, a field superintendent, on the Project. *See, e.g.*, Ex. D-123 at 1.
18. Keating’s duties included quality assurance and quality control (“QA/QC”) functions for the Project. TD8 Tr. at 29, *l.* 2–10. *See* Definition fff. of the Special Contract Requirements (“SpCR”) (defining “Construction Manager” as the “Owner’s liaison” to the contractor) TD6 Tr. at 125, *l.* 7–17; Ex. D-1 at 99.
19. The quality assurance inspector on the Project was Carl Pizzo, who worked for a subcontractor to Keating. As the field QA/QC inspector supervised by Keating, Mr. Pizzo’s role was to see that the “proper materials were being used,” and that the work was installed “per the specifications and plans.” TD6 Tr. at 101, *l.* 14–19; pg. 103, *l.* 5–8.
20. At all times throughout the Project, Mr. Pizzo was either employed directly by Keating or employed directly by subcontractors of Keating who were approved by the City to perform work on the Project. TD6 Tr. at 103, *l.* 12–19; TD8 Tr. at 29, *l.* 16 to pg. 30, *l.* 5.
21. As the Construction Manager, Keating had the authority to act on behalf of the City. TD6 Tr. at 125 to pg. 126, *l.* 1; Ex. D-1 at 99.

22. Keating prepared and submitted to the City monthly Project reports reflecting the status of the work, anticipated progress of the work, and payments made to Nolt. TD7 Tr. at 125, *l.* 17 to pg. 126, *l.* 1.
23. Under the Special Contract Requirements, Keating had the authority to accept and reject work which it deemed as non-compliant with the Contract Documents. TD1 Tr. at 52, *l.* 22–24; Ex. D-1 at 99.
24. In mid-2015, the City publicly advertised Phase II as a multi-prime project comprising of a general construction prime contract and a plumbing prime contract. Stip. Facts ¶¶ 10, 12.
25. On July 7, 2015, the City accepted and opened bids for Phase II. Stip. Facts ¶¶ 10, 12.
26. The City awarded the Phase II general construction contract for the Project to Nolt on August 18, 2015 and issued the Notice to Proceed to Nolt on September 22, 2015. Ex. P-7.
27. Nolt’s work for Phase II included window replacement, masonry repairs, and replacement of the roof, which required the installation of some structural and other steel. Stip. Facts ¶ 11.
28. Pursuant to the Notice to Proceed, Nolt had 450 days to complete its work. The Notice to Proceed expressly provided that the “Completion Date” for the Project was set at December 16, 2016. Stip. Facts ¶ 21.
29. The Contract documents included plans, Standard Contract Requirements (“StCR”), Special Contract Requirements (“SpCR”), details and addenda (collectively, the “Contract Documents”). Ex. D-1 at 29.

30. Nolt has been in the roofing business since approximately 1990, periodically contracting with public entity clients throughout Pennsylvania, New Jersey and Delaware. TD1 Tr. at 34, *l.* 21 to pg. 35, *l.* 3. Over the years, Nolt undertook general construction work for renovation projects that often involve varying degrees of roofing work. TD1 Tr. at 35, *l.* 6–11.
31. David Nolt is the President of Nolt. TD1 Tr. at 76, *l.* 25 to 77, *l.* 1. Richard O’Brien is Nolt’s Vice President. *Id.* at 34, *l.* 14–15. Charles (Chuck) Knauff was an employee of Nolt. *Id.* at 76, *l.* 24–25.
32. Nolt hired Russell Berner of Construction Claims Group (“CCG”) as a scheduling expert.
33. The City hired Peter Vosbikian of HKA as a scheduling expert.
34. Nolt hired Scott Dolan of Wiss, Janey, Elstner Associates as a roofing expert.
35. The City hired James Cohen as a roofing expert.
36. Throughout the Project, Mr. Pizzo was responsible for the daily observations of all construction activities at the Project. His specific job function was to observe whether the work being installed was in accordance with the Contract Documents. TD8 Tr. at 32, *l.* 13–22. If he identified any item of work that he concluded did not conform to the Contract Documents, including during the roof installation work, Mr. Pizzo was expected to report his observation to Keating. TD6 Tr. at 128, *l.* 8–16; TD9 Tr. at 36, *l.* 14–18. Mr. Pizzo was on the Project site daily from the commencement of on-site construction activities for Phase II in the fall of 2015 through December 2017. TD6 Tr. at 127, *l.* 23 to pg. 128, *l.* 3.

37. Prior to approving Mr. Pizzo to serve as QA/QC inspector, Mr. Pinto did not inquire into Mr. Pizzo's experience with large commercial roof projects, torch-applied roofing systems, or Mr. Pizzo's experience with Siplast roof products, which had been specified for this Project. TD8 Tr. at 31, *l.* 4–13. Mr. Pinto had not determined whether Mr. Pizzo had any formal or informal training for identifying, measuring, correcting, ameliorating, or otherwise dealing with moisture in roof systems. TD8 Tr. at 35, *l.* 21 to pg. 36, *l.* 10.
38. Mr. Pinto, as the City's Project Manager, reviewed Mr. Pizzo's resume before approving him to serve in the position of QA/QC inspector for the Project, and Mr. Pinto was satisfied with Mr. Pizzo's prior work experience. TD8 Tr. at 30, *l.* 6–13.
39. Mr. Pizzo had operated his own construction company in the 1980s, but approximately 75% of that work was limited to small residential projects. TD9 Tr. at 26, *l.* 2–6. During those seven years, Mr. Pizzo's largest commercial contract was valued at less than \$100,000. TD9 Tr. at 26, *l.* 7–12. In 2009, Mr. Pizzo was involved in a serious car accident, and due to his injuries, Mr. Pizzo did not work from 2009 until the fall of 2015 when he was approved as the QA/QC Inspector for this Project. TD9 Tr. at 5, *l.* 19 to pg. 6, *l.* 1.
40. Prior to assuming the Project role as QA/QC Inspector, Mr. Pizzo had not worked on a project that involved a torch-applied membrane roof system similar to the roof system specified by Ballinger for the Project, TD9 Tr. at 29, *l.* 9–12, and prior to assuming the role as QA/QC inspector on the Project, Mr. Pizzo had had no formal training in QA/QC, TD9 Tr. at 30, *l.* 13–16.

41. Prior to assuming the role as QA/QC Inspector and throughout his time on the Project, Mr. Pizzo was not a certified roof installer by any roofing manufacturer, TD9 Tr. at 35, *l.* 25 to pg. 36, *l.* 2, and prior to assuming this role as QA/QC Inspector, Mr. Pizzo never worked for a construction manager in any capacity, TD9 Tr. at 31, *l.* 17–19. Prior to assuming the role as QA/QC Inspector on the Project, Mr. Pizzo had no specific experience working with Siplast roof systems. TD9 Tr. at 34, *l.* 1 to pg. 35, *l.* 2.
42. Nolt had no design responsibility on the Project. TD1 Tr. at 46, *l.* 22–24.
43. In August 2015, the City awarded the plumbing prime contract for the Project Phase II to John Bee, Inc. (“John Bee”). TD1 Tr. at 38, *l.* 9–12.
44. John Bee’s scope of work included installation of all roof drains and the replacement of certain roof drain piping referred to as “leaders”. TD1 Tr. at 38, *l.* 25 to pg. 39, *l.* 3.
45. Nolt’s work included the installation of two roof systems, one installed on a concrete deck and one installed on a metal deck. TD1 Tr. at 41, *l.* 22–25, Ex. PD-1; Ex. PD-2.
46. Siplast was the manufacturer of the roof system specified in the Contract Documents and approved by the City, and Siplast issued written installation instructions for the roof system.
47. There was no documentary, testimonial, or expert evidence introduced at trial to prove that Nolt failed to install the roof systems in accordance with Siplast’s installation instructions.
48. The roof system specified in the Contract Documents to be installed on metal decks included a mechanically fastened layer of a cementitious board called DensDeck. On top of the DensDeck, the specified roof system required a heat torch-applied vapor barrier that then adhered to the DensDeck on top of which the roof system required the



installation of multiple layers of insulation. Then, on top of the insulation, the roof system required the installation of another layer of DensDeck. Finally, on top of the second layer of DensDeck, the specified roof system required the installation of a two-ply modified roof system comprising of a “first ply” and a “cap sheet” that was heat torch-applied. TD1 Tr. at 42, *l.* 5 to pg. 43, *l.* 3; Ex. PD-1.

49. The roof system to be installed on the concrete decks mirrored the system for the metal deck, except there was no first layer of DensDeck required to be installed directly on the concrete deck. Rather, the Contract Documents required the installation of a vapor barrier which was torch-applied directly to the concrete deck. TD1 Tr. at 43, *l.* 4–19; Ex. PD-2.

50. The vapor barrier came from the manufacturer in rolls that were 3 feet wide by 33 feet long. These rolls were heated with an open flame to make the material on the back of the vapor barrier viscous so that when rolled onto the substrate the vapor barrier would adhere to the substrate.

51. The vapor barrier was installed in a manner by which approximately 3” of one roll of vapor barrier would overlap with (rather than butt against) the adjacent roll. TD1 Tr. at 44, *l.* 21 to pg. 45, *l.* 23; Ex. PD-3; Ex. PD-4. The insulation was applied to the vapor barrier with a foam adhesive that was applied in a serpentine pattern and then weighed down until the adhesive set or hardened. TD4 Tr. at 55, *l.* 10–19. DensDeck was then adhered to the insulation through the use of a foam adhesive that was also applied in a serpentine pattern. The cap sheet and the first ply of the roofing system were then adhered to each other by heating the backside of each with a torch to create a molten, modified asphalt bitumen material. TD2 Tr. at 33, *l.* 25 to pg. 34, *l.* 5.

52. The material on the back side of the vapor barrier, first ply, and cap sheet when heated readily appeared “wet,” i.e., black and shiny. TD2 Tr. at 34, *l.* 6–9.
53. In Roof Areas 2 and 8, there were large elevated roof sections referred to as “pop-ups.” Each “pop-up” was surrounded by a roof curb. The top surface of the “pop-up” was not in Nolt’s scope of work to replace but rather was intended to remain in its original condition. TD2 Tr. at 10, *l.* 24 to pg. 11, *l.* 8; TD4 Tr. at 106, *l.* 14–23; TD9 Tr. at 70, *l.* 16–22.
54. The Contract between the City and Nolt included an interim completion milestone date of July 2016 for the completion of masonry and window work on two distinct elevations. Nolt was to complete this work by this milestone date so that excavation and erection work for Phase III could commence immediately. TD1 Tr. at 96, *l.* 16 to pg. 97, *l.* 1; Stip. Facts ¶ 16.
55. On or about October 27, 2015, for its own ministerial purposes, the City assigned its rights under the Contract to the Philadelphia Municipal Authority (“PMA”), Stip. Facts ¶ 22, but this assignment was of no relevance to the issues in this case. For purposes of the Court’s Findings and Conclusions, the Court’s use of the term “City” means both the City itself and PMA.
56. In or about December 2015, Keating estimated that the cost of Phase III would be approximately \$163 million, TD6 Tr. at 162, *l.* 17 to pg. 162, *l.* 5; Ex. P-23, and Ballinger estimated that the cost of Phase III would be approximately \$173 million. TD6 Tr. at 163, *l.* 6–13; Ex. P-24. In either estimation, Phase III’s cost was greatly in excess of Phase II’s cost.

57. According to Section 013120, paragraphs 1.4(A)(2) and 1.7(A) of the Contract Documents, Nolt was required to submit an initial baseline schedule of construction activity within 21 days of the Notice to Proceed, a final baseline schedule within 35 days of the Notice, and monthly updates thereafter. Ex. D-1 at 223–24, 226.
58. At least as of February 2016, approximately 6 months after the issuance of the Notice to Proceed, Mr. Pinto learned that then newly elected Mayor Jim Kenney had ordered a feasibility study to determine whether the City would proceed with Phase III. TD6 Tr. at 164, *l.* 13–17.
59. In February 2016, Mr. Pinto notified Ballinger and Keating (but not Nolt) about the fact of the feasibility study and the possibility that the City may not continue with the work on the Project. TD6 Tr. at 164, *l.* 20 to pg. 165, *l.* 17; Ex. P-98.
60. Beginning the next month, in March 2016, rumors began to circulate on the Project site amongst the field personnel that the new mayor “wanted to cancel” Phase III and, logically, cancel the plan to move to the Market Street property. TD1 Tr. at 98, *l.* 20 to pg. 99, *l.* 10; P-72; TD6 Tr. at 168, *l.* 5 to pg. 129, *l.* 1. This, naturally, would call into question the City’s approach to the Phase II work underway.
61. Despite notifying both Ballinger and Keating to the contrary, Mr. Pinto told Nolt that any discussions or rumors concerning the status of Phase III should be ignored and that Nolt should focus its attention on deploying the necessary resources to meet the interim completion milestone date so that Phase III could proceed. TD1 Tr. at 99, *l.* 11–15; Ex. P-53. At trial the City did not reconcile these “mixed messages.”

62. Mr. Pinto did not advise Nolt of the City-ordered feasibility study concerning whether to cancel Phase III because he (Mr. Pinto) did not believe such information was “relevant” to Nolt. TD6 Tr. at 169, *l.* 2–5.

63. In March 2016, the City knew or at least expected that Phase III would not “seamless[ly]” follow Phase II (if it proceeded at all). TD6 Tr. at 170, *l.* 2–10.

64. Mr. Pinto never advised Nolt that Phase III was put on hold by the City. TD6 Tr. at 169, *l.* 25 to pg. 170, *l.* 1.

## **II. Nolt begins work on the Project**

65. After receiving the Notice to Proceed, Nolt prepared a schedule for the Project. TD1 Tr. at 56, *l.* 7. The Contract required Nolt to prepare a “Final Construction Schedule” which would serve as the Project schedule as agreed to by the City, Nolt, and John Bee. Tr. at 58, *l.* 9–18; Ex. D-1 at 223, 1.4(A)(1).

66. Nolt engaged Envision Consultants as its scheduler. TD1 Tr. 6/14 at 59, *l.* 14–20.

67. In the construction industry, the Final Construction Schedule is typically referred to as a “baseline schedule.” TD1 Tr. at 57, *l.* 8–18; pg. 60, *l.* 9–1; Ex. P-35.

68. The baseline schedule showed the contractor’s proposed sequence of activities and the relationship between and among them. TD6 Tr. at 53, *l.* 13-23; *see also* TD2 Tr. at 106, *l.* 22–25. There was no requirement for a list of minimum durations per task or shortest critical path, as long as the baseline schedule shows the work being completed on time. TD6 Tr. at 53, *l.* 13 to 54, *l.* 9; *cf.* Ex. D-205 at 1.

69. JBC Associates (“JBC”), a sub-consultant to Keating, reviewed Nolt’s schedule submissions and advised Keating and the City concerning the submissions. TD1 Tr. at 59, *l.* 21 to pg. 60, *l.* 2. Stip. Facts ¶¶ 26, 28, 30, 32.

70. Collaboration between a contractor and an owner regarding the preparation of a baseline schedule is typical. TD6 Tr. at 174, *l.* 16–25.
71. The baseline schedule describes the sequence of construction activities as well as the durations, including start and completion dates, for each construction activity required to be completed in order for the Project to be completed within the time period set forth in the Contract Documents. TD1 Tr. at 61, *l.* 7–15; TD3 Tr. at 18, *l.* 14–24.
72. “Float” reflects the number of days of “cushion” for an activity. So, if an activity had “zero float,” any delay to that activity would have a corresponding day-for-day delay to the project completion. TD1 Tr. at 61, *l.* 18 to pg. 62, *l.* 1; TD3 Tr. at 10, *l.* 11–15; TD7 Tr. at 85, *l.* 24 to pg. 86, *l.* 25; pg. 120, *l.* 8–18. Mr. Pinto described the baseline schedule as a “roadmap” for how the contractor plans on completing its work. TD6 Tr. at 175, *l.* 1–10.
73. On December 23, 2015, Nolt submitted a revised baseline schedule showing a new structural steel submittal deadline of January 22, 2016 with structural steel fabrication and delivery finishing on April 22, 2016. Both show 115 days of “float.” Ex. D-72 at 2, 4.
74. The duration for structural steel fabrication and delivery remained the same at 50 days, as it was in the initial baseline schedule. *Id.* at 4.
75. On February 2, 2016, Nolt submitted another revised baseline schedule that extended the duration for structural steel fabrication and delivery from 50 days to 98 days. Ex. D-101 at 5; *see* Ex. D-205 at 1.
76. At this point, the float time for the structural steel path materially decreased to 15 days. Ex. D-101 at 5.

77. An “Approved Baseline Schedule” is an agreement by the contractor and owner with respect to the sequence and durations of each construction activity necessary to complete the Project as required by the contract documents. TD3 Tr. at 18, *l.* 4–13.
78. The “critical path” of a project schedule is the longest and logical sequence of activities from the start of the project through its completion. TD3 Tr. at 9, *l.* 17–20; TD1 Tr. at 58, *l.* 24 to pg. 59, *l.* 8. A “critical path delay” occurs “if there is any impact on any activity that’s on the driving critical path.” TD5 Tr. at 5, *l.* 10–11.
79. On February 15, 2016, Nolt submitted a final baseline schedule, Ex. P-35 at 2, showing on-time completion but reducing the “float” for the structural steel path to zero by having the start of roof work wait until after the completion of all steel installation. *Id.* at 3–6; *see* Ex. D-85 at 5–6; *see also* Ex. D-111 at 1; Ex. D-62 at 4, 7.
80. Contract Documents section 15000-5, 3.9(b)(2) required the contractor to provide a completely enclosed, weather tight building, in accordance with the construction schedule. Nolt understood this to mean that Nolt would have to ensure each day that its work was protected and did not allow for water penetration into the building in the areas where Nolt had performed its work.
81. To satisfy these requirements, Nolt’s initial plan was to demolish one area of the existing roof at a time and to re-roof that area the same day to prevent water from entering the building. TD4 Tr. at 104, *l.* 15–19. Nolt did not believe that it was necessary to make the entire building water-tight at the very moment it mobilized to the Project, but rather it considered it Nolt’s responsibility to keep water out of the building in areas in which Nolt had commenced work. TD4 Tr. at 105, *l.* 15–23.

82. As a result, Nolt implemented temporary protection in the nature of the installation of the vapor barrier or tarping to protect areas in which it commenced work. TD4 Tr. at 106, *l.* 4–10. Nolt checked on these “temped in” areas on a daily basis. TD4 Tr. at 106, *l.* 11–13.
83. In contrast, Mr. Pinto thought these referenced contract provisions meant that Nolt was responsible to keep the entire building water-tight every day, even in areas that were not included in Nolt’s scope of work or in areas where Nolt had not yet commenced to work. TD8 Tr. at 23, *l.* 9 to pg. 25, *l.* 8. Mr. Pinto thought that even though water was entering the building in multiple places from a time before Nolt was awarded a contract for the Project, according to him Nolt was nonetheless obligated to make the entire building water-tight as soon as it mobilized anywhere on the site and before it actually performed any work on the Project. TD8 Tr. at 27, *l.* 23 to pg. 28, *l.* 8. This view is not tied to any specific contract provision.
84. The Approved Baseline Schedule showed two critical paths. TD3 Tr. at 19, *l.* 3–6; Ex. P-35.
85. The first critical path went through the structural steel activities of procurement of a steel vendor, and preparation of structural steel shop drawings. TD3 Tr. at 19, *l.* 3–8.
86. The second critical path went through the exterior masonry, where work could not begin until March to meet the temperature requirements to install masonry. TD3 Tr. at 19, *l.* 9–15.
87. The Approved Baseline Schedule provided that Nolt was to secure its steel subcontractor(s) by soliciting vendors, receiving bids, reviewing the bids, and commencing preparation of its structural steel drawings on September 23, 2015 for

submission to the City for approval no later than on January 22, 2016, or 121 calendar days thereafter. TD1 Tr. at 62, *l.* 2–11; Ex. P-35; TD1 Tr. at 65, *l.* 19–24; TD3 Tr. at 45, *l.* 23 to pg. 46, *l.* 1; TD6 Tr. at 177, *l.* 3–10, pg. 178, *l.* 3–6.

88. Nolt submitted its initial baseline schedule on November 9, 2015, roughly a month late. Stip. Facts ¶ 25.

89. According to Nolt’s initial baseline schedule, structural steel shop drawing submittals would take 66 days and be complete by December 24, 2015, followed by two weeks for the City’s review and approval of the shop drawings. Ex. D-31 at 1–2. The schedule then estimated fabrication and delivery of the structural steel would take 50 days from January 19, 2016 to March 28, 2016. Ex. D-31 at 3. Each of these activities was listed as having 89 days of “float.” *Id.* at 1–3. The roof work, beginning with the demolition of the old roof, was scheduled to start March 14, 2016. *Id.* at 4.

90. The preparation and submission of steel submittals in the Approved Baseline Schedule had zero “float,” and any delay in this activity would cause a commensurate delay to the Project completion. TD1 Tr. at 62, *l.* 10–16; P-35.

91. The Approved Baseline Schedule called for the City and its consultants to have until February 12, 2015 to review and approve Nolt’s structural steel submittals or 142 calendar days after September 23, 2015. This Schedule included time for “recycle,” or for shop drawings to be revised in accord with the designer’s comments. This is not uncommon in the construction industry. TD1 Tr. at 62, *l.* 17 to pg. 63, *l.* 4; P-35; TD3 Tr. at 46, *l.* 2–6.



92. This review and approval of structural steel shop drawing activity, as with other initial steel submittals, had zero “float,” and any delay in this activity, too, would cause an equivalent delay to the Project completion. TD1 Tr. at 63, *l.* 1–9; P-35.
93. The Approved Baseline Schedule provided that the time for fabrication of structural steel was to begin on February 15, 2016 and conclude on June 30, 2016. TD1 Tr. at 63, *l.* 10–17; Ex. P-35.
94. The fabrication of structural steel activity had zero “float,” and any delay in this activity would cause an equivalent delay to the Project completion. TD1 Tr. at 63, *l.* 17–22; Ex. P-35.

### **III. The City introduces changes to the Project**

95. On November 16, 2015, at or about the same time that Nolt was attempting to set its steel subcontracts, the City issued Bulletin 2. TD1 Tr. at 68, *l.* 10–15; Ex. P-15.
96. Bulletin 2 included design changes which involved drawings and included changes in the size of roof openings, the addition of new structural steel elements, changes to structural steel included in the original drawings, changed control points, revisions to penetrations, additional penetrations, and modifications to roof curbs. TD1 Tr. at 69, *l.* 7–20.
97. Bulletin 2 also provided that the drawings were being revised to “Match Campus Development Phase,” which meant that the Phase II work required revision in order to match the then-developing Phase III design. Ex. P-15; TD1 Tr. 73, *l.* 10–12.
98. Bulletin 2 impacted the design and work of Phase II; it was issued because the design for Phase III was not complete. Ex. P-15; TD1 Tr. at 70, *l.* 11–14.

99. Bulletin 2 described numerous potential design changes. The City requested Nolt only provide pricing for the various proposed changes, but did not designate Bulletin 2 a change order or a change directive that formally altered the scope of Nolt's Phase II base contract. TD1 Tr. at 68, *l.* 22 to pg. 69, *l.* 6; Ex. P-15.
100. To provide pricing for Bulletin 2, Nolt identified each of the changes by comparing the original contract drawings, page by page, to the revised drawings included in Bulletin 2. TD1 Tr. at 69, *l.* 20–23.
101. None of the material roofing work could be reasonably commenced until the steel and roof design was clear and finalized. TD1 Tr. at 69, *l.* 24 to pg. 70, *l.* 4.
102. On December 23, 2015, Nolt submitted a revised baseline schedule showing a new structural steel submittal deadline of January 22, 2016 and structural steel fabrication and delivery finishing on April 22, 2016, both with 115 days of “float.” Ex. D-72 at 2, 4. However, the duration for fabrication and delivery remained the same at 50 days. *Id.* at 4.
103. On February 2, 2016, Nolt submitted a revised baseline schedule that lengthened the duration for structural steel fabrication and delivery from 50 days to 98 days. Ex. D-101 at 5; *see* Ex. D-205 at 1. The “float” time for the structural steel path arguably decreased to 15 days. Ex. D-101 at 5.
104. On February 15, 2016, Nolt submitted a final baseline schedule, Ex. P-35 at 2, showing on-time completion but reducing the “float” for the structural steel path to zero by setting the start of roof work after the completion of all steel installation. *Id.* at 3-6; *see* Ex. D-85 at 5–6; Ex. D-111 at 1.

105. On December 28, 2015, 42 days after issuing Bulletin 2, the City issued Bulletin 3 to Nolt. Ex. P-20.
106. The changes issued in Bulletin 3 reflected the still ongoing design process for Phase III. Ex. P-20; TD1 Tr. 73, *l.* 4–12; TD6 Tr. at 182, *l.* 7–21.
107. Bulletin 3 included additional changes to the roof, added and revised roof openings, updated campus grid drawings to match the anticipated Phase III, added a new drawing to define control points, made changes to the structural steel work, and added a new drawing for a screen wall. TD1 Tr. 72, *l.* 19–25; Ex. P-20 at 2–3. All of these matters implicated Nolt’s work.
108. Bulletin 3 issued new drawings which provided control points. TD4 Tr. at 110, *l.* 3–9; Ex. P-20 at 8–9.
109. Bulletin 3 revised one drawing to “update the grid to match the campus development phase” and provide critical information that was needed in laying out and measuring the work in the field. Ex. P-20; TD4 Tr. at 111, *l.* 10–15.
110. The addition and revisions to the control plan drawings had an impact on the steel layout, including preparation of the shop drawings. This is because control points are dimensional points that are provided by designers that give a starting point for measurements, and are used by contractors in laying out steel work. TD4 Tr. at 111, *l.* 16–23; TD4 Tr. at 110, *l.* 13–18.
111. Bulletin 3 (like Bulletin 2) included potential design changes, but again the City requested Nolt only provide pricing for the proposed changes, making clear that Bulletin 3 again (like Bulletin 2) was not a change order or a change directive that would formally alter the scope of Nolt’s base contract. TD1 Tr. 72, *l.* 16–18.

112. Previously, on November 20, 2015, the City sent Transmittal No. 2 enclosing Bulletin 2 to Nolt. Ex. D-44. Five weeks later, on December 28, 2015, the City sent to Nolt Transmittal No. 4 enclosing Bulletin 3 with the same instructions as Transmittal No. 2, namely for Nolt to “evaluate for cost and schedule impact (if any)” within 10 days. Ex. D-75. Both Bulletins 2 and 3 and their cover transmittal memos contained explicit instructions that “This is not to be considered instruction to stop work in progress . . . nor to execute the proposed change. DO NOT proceed with this work until a Change Order has been issued. DO NOT stop your contract work unless a Stop Work Notice has been issued” and “THIS IS NOT A CHANGE ORDER, A CONSTRUCTION CHANGE DIRECTIVE OR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED.” Ex D-44; Ex. P-15; Ex. D-75; Ex. P-20; TD2 Tr. at 107, *l.* 20 to 108, *l.* 11.

113. With the issuance of Bulletins 2 and 3, Nolt considered its choices: proceed with the base contract work or take the business risk that the City would formally change the steel design before finalizing Nolt’s procurement of the steel work.

114. If Nolt immediately commenced work on the base contract scope of work as at that moment conceived (when the material features of the design were far from complete), the work performed by Nolt would not have coordinated with Phase III, a circumstance which would have been, in the words of Project participants, “problematic.” TD6 Tr. at 187, *l.* 8 to pg. 188, *l.* 3.

115. The City could have issued a stop work order to stop Nolt from performing any construction activity that conflicted with Phase III, but it is not plausible but rather it was indeed unlikely that the City would have permitted the comparatively lesser (\$13

million) Phase II work to dictate the design for the much more extensive (\$160–170 million) Phase III. TD6 Tr. at 187, *l.* 5–15.

116. Based on its business practices and experience, Nolt reasonably believed that it was better for the progress of the Project and in keeping with commercial reasonableness to issue one subcontract for the subject work without the need to issue costly and inefficient seriatim change orders. TD6 Tr. at 10, *l.* 18–25.

117. Based on Nolt’s prior history with the City with respect to negotiating change orders, Nolt reasonably sought to avoid the need for change orders on the Project because, in the past, Nolt was not compensated for the actual cost of changed or added work. TD1 Tr. at 89, *l.* 5–11; TD6 Tr. at 11, *l.* 5–14.

118. Nolt’s conduct also was reasonable given Mr. Pinto’s admission that when exercising his role as Project Manager, he believed that contractors are “always trying to get extra money from the City”, and that it was his job “to protect the City.” TD6 Tr. at 195, *l.* 4 to pg. 196, *l.* 2. This Project was fraught with and marked by such mutual suspicion, including the not unfounded concern that the City was going to opt for an entirely different Project site and certainly would not be unmindful of the undesirability of spending money on an abandoned project.

119. Mr. Pinto served as Project Manager believing that he knew more than anyone else what was best for the City.

120. On February 10, 2016, via e-mail, Mr. Pinto opined to his supervisor, Deputy Commissioner Garry Knappick, that the Phase II roof drawings “were a disaster,” TD6 Tr. at 196, *l.* 14–16; Ex. P-31, testifying that he sent this email because he wanted to “prove a point” to his supervisor that City decision-makers should have accepted and

- followed Mr. Pinto's recommendation to bid the roof work in Phase III rather than having that work be part of Phase II, Ex. P-31; TD6 Tr. at 197, *l.* 6 to pg. 198, *l.* 19.
121. Nolt's business decision to have work on the steel await the resolution of the numerous Bulletins was reasonable. TD6 Tr. at 193, *l.* 15–21.
122. In early 2016, Nolt became concerned by the delays in the City's decision to finalize design changes, so Nolt directed East Coast Steel to prepare shop drawings based on the original base scope design. TD1 Tr. at 79, *l.* 4–12; Ex. P-28; Ex. D-89, Ex. P-35.
123. Pursuant to the City's direction to provide pricing for Bulletins 2 and 3, Nolt asked East Coast Steel and Umoja Erectors, LLC for pricing on Bulletins 2 and 3 in the format demanded by the City. This format for pricing was specific and, according to Nolt, arduous, requiring quantities broken out for labor and material for each of the many various proposed changes. TD1 Tr. at 75, *l.* 5–22.
124. On February 16, 2016, East Coast Steel prepared preliminary and partial shop drawings that Nolt submitted to the City. Ex. D-120.
125. It is not uncommon to submit partial sets of shop drawings to a designer for review. TD5 Tr. at 43, *l.* 6–7.
126. But then, on or about February 15, 2016, a month and a half after issuing Bulletin 3, the City instructed Nolt to stop pricing Bulletins 2 and 3 because yet another new Bulletin would soon be issued. TD1 Tr. at 75, *l.* 23–24; Ex. P-37.
127. Mr. Ellman of Ballinger testified that not having signed and sealed shop drawings was not an impediment for obtaining approval of the shop drawings. TD7 Tr. at 25, *l.* 9–20.

128. Nonetheless, upon receipt of East Cast Steel's preliminary shop drawings, Ballinger stamped the pages as "incomplete" and "not reviewed." TD1 Tr. at 82, *l.* 15–18; Ex. D-120.
129. Ballinger did not review the East Coast Steel shop drawings because it knew that the design would be modified shortly by an additional Bulletin. TD5 Tr. at 43, *l.* 4–9; Ex. D-120.
130. At this time, in February 2016, it was reasonably clear that the steel and roof design for Phase II was changing for a third time. The final design remained in flux, through no fault of Nolt. TD1 Tr. at 77, *l.* 13–17.
131. Within a week, on February 22, 2016, Mr. Pinto confirmed in writing that Bulletins 2 and 3 were void and that more redesigns would be issued and forthcoming. The City's decision to redesign the steel work prevented Nolt from proceeding with its steel work. TD1 Tr. at 77, *l.* 18–24; Ex. P-37; TD6 Tr. at 182, *l.* 22 to pg. 183, *l.* 3.
132. Pursuant to the Approved Baseline Schedule, the steel submittals were supposed to have been reviewed already and approved by the time that Mr. Pinto had advised that another Bulletin was going to be issued. TD1 Tr. at 78, *l.* 5–12; Ex. P-35.
133. In March 2016, Ballinger and the City completed the design documents for Phase III, which prompted the need to issue and implement Bulletin 7 in Phase II. TD6 Tr. at 169, *l.* 18–20, pg. 170, *l.* 16–19.
134. Specifically, on March 7, 2016, the City issued Bulletin 7. Ex. P-44. The transmittal email to Bulletin 7 "authorized [Nolt] to immediately incorporate the [B]ulletin #7 changes into" the shop drawings and other submittals. Ex. D-135 at 1. The email also instructed Nolt not "to wait for the pricing and change order to be finalized prior to

doing your layout work or submittals that are affected. We will negotiate a change order price prior to the fabrication and installation of this work.” *Id.* Nolt’s response was due two weeks later, by March 21, 2016. *Id.*

135. Bulletin 7 revised quantities and locations of roof slab openings, revised elevations, added temporary roof covers for future opening that were a part of Phase III, changed drain locations, revised Grid numbering and finally firmly established control points for the necessary Project layout Grid. TD1 Tr. at 86, *l.* 9 to pg. 87, *l.* 2; TD4 Tr. at 112, *l.* 3–15; Ex. P-42; Ex. P-20.

136. Bulletin 7 included over 25 drawings which either revised original Contract Documents or added new drawings. TD1 Tr. at 86, *l.* 23–24; Ex. P-42.

137. The Control Grid provides reference lines in the Project. TD7 Tr. at 6, *l.* 6–9.

138. As stated *supra*, control points are the starting point for measuring, and provide the most accurate way to measure in the field. TD6 Tr. at 63, *l.* 15–28; pg. 186, *l.* 10–14.

139. The Control Points are tied to the Control Grid after a surveyor measures the distance from the point to the Grid. TD7 Tr. at 6, *l.* 14–23.

140. It is prudent for a contractor to perform field verification prior to submitting shop drawings. TD7 Tr. at 33, *l.* 19 to pg. 24, *l.* 9.

141. Mr. Ellman testified that because Bulletin 7 revised new opening locations and added new slab infill locations, it was important to have the grid layout and control points be accurate so that Nolt could perform field measuring on the Bulletin 7 design changes. TD7 Tr. at 21, *l.* 20 to pg. 22, *l.* 4.

142. On March 16, 2016 (in a letter mistakenly dated February 16, 2015), Nolt wrote to the City that, while it believed cost and time impacts “will be addressed through the



change order process,” “we reserve all rights under the terms of the contract to pursue a claim to address the additional costs incurred and the time extension that will be required as the result of the changes in scope per Bulletin #7.” Ex. D-151 at 1. The City suggested Nolt “wait to reserve your right to pursue a claim until perhaps we actually have a proposal in hand and we go through the negotiation process?” Ex. D-152. In a follow-up email, Mr. O’Brien wrote to Mr. Pinto that “We were told we had to do this whenever there was a change that would impact the cost or schedule of the project, and that it had to be done in a certain time period. . . . we are sensitive to losing our rights to pursue a claim for costs and schedule based on the numerous times you and the project team have stressed to us that we could potentially lose the right to pursue a claim if proper notification is not made.” Ex. D-153 at 1.

143. During May 2016, Nolt and the City discussed the price of the many Bulletin 7 changes. TD6 Tr. at 69, *l.* 14–23; Ex. D-274. Among other things, Nolt’s proposal included an additional cost for new structural steel shop drawings, Ex. D-225 at 6, but also disputed calculations with respect to the steel pricing, TD6 Tr. at 69, *l.* 20–23; Ex. D-272 at 1–2; Ex. D-274.

144. On June 1, 2016, Nolt and the City agreed on a price of \$72,631 for the Bulletin 7 changes, which then was incorporated into Change Order 8. Ex. D-274 at 1. Reportedly because Nolt had not requested a specific time extension or provided a specific time impact analysis, the City prepared Change Order 8 reflecting the agreed price of \$72,631 and with a Time Impact of zero days. Ex. D-300 at 5. The price included the additional funds for revision of structural steel shop drawings. Ex. D-274 at 6.

145. When Nolt signed and returned the Change Order 8 form, along with two other change orders, it included the language “D.A. Nolt, Inc. letter June 13, 2016 is made part of this Change Order [8].” Ex. P-73. The June 13, 2016 letter, attached to the Change Order, stated that “David Nolt never confirmed a time extension was not required for the completion of Change Order GCON-E-008 (Bulletin #007). As such, we reserve the right to pursue an appropriate time extension.” *Id.* at 6. Mr. O’Brien also had crossed out (i.e., disagreed with) the note from Mr. Pinto on Nolt’s proposal that Mr. Nolt had said “there will not be any schedule impact with this change order” at the April 15, 2016 meeting. *Id.* at 7.
146. Nolt had submitted partial steel shop drawings on June 8, 2016, Ex. D-295 at 1, which were rejected by the architect on June 14, 2016, ostensibly because they were prepared using the base bid rather than reflecting the Bulletin 7 changes. Ex. D-295 at 1.
147. Then Nolt submitted revised steel shop drawings based on Bulletin 7 on June 27, 2016, which were approved on July 14, 2016 as “Proceed as Noted, Revise + Resubmit for Record” in accordance with the architect’s comments, including a note directing the “Contractor [Nolt] to Verify Field Dimensions.” Ex. D-321 at 1.
148. On July 12, 2016, Nolt submitted Update #5 showing that structural steel submittals were 95% complete and Bulletin 7 submittals were 75% complete, resulting in structural steel having 25 days of float while the overall project would finish 6 days late. Ex. D-314 at 7–8. In this Update, Bulletin 7 activities were listed as having 71 days of float. *Id.* at 7.
149. On July 26, 2016, Nolt signed Change Order 8. Ex. D-323 at 1–2.

**IV. Nolt begins work on the Project, delayed by the City's changes**

150. On August 10, 2016, Keating held a steel Pre-Installation Meeting attended by representatives of Nolt, Umoja, RCC Fabricators, Keating, and Ballinger. Ex. P-85; TD1 Tr. at 121, *l.* 10–18.
151. At the Pre-Installation Meeting, Ballinger informed Nolt that Nolt was required to take field dimensions and measuring from the control plan grid, and not from the existing steel. Nolt was instructed specifically not to measure from the existing structure. TD6 Tr. at 186, *l.* 15–24; Ex. P-85; TD6 Tr. at 131, *l.* 2–11.
152. Mr. Ellman did not object to any part of the meeting minutes from the Pre-Steel Installation meeting. TD7 Tr. at 25, *l.* 21 to pg. 26, *l.* 5; P-85.
153. Thus, logically, prior to the issuance of Bulletin 7, Nolt could not have followed Ballinger's direction to field measure from the control points rather than the existing structure. TD1 Tr. at 122, *l.* 1–9; TD7 Tr. at 27, 22 to pg. 28, *l.* 3.
154. The Bulletin 7 revisions to the Grid also materially impacted the preparation of Nolt's shop drawings. TD4 Tr. at 112, *l.* 16–20.
155. The design of the steel was not finalized until March 7, 2016, when Bulletin 7 was issued, which meant that meaningful drafting of shop drawings could not have reasonably commenced before this date. TD3 Tr. at 22, *l.* 13–16.
156. Contemporaneous with the issuance of Bulletin 7, Keating, on behalf of the City, issued an email directing Nolt to immediately incorporate Bulletin 7 into its submittals rather than await issuance of a change order. Ex. P-44; TD1 Tr. at 86, *l.* 5–8.

157. At the time Keating directed Nolt to proceed with Bulletin 7, Keating and the City knew that the Project was behind schedule and that the design for Phase III was finally complete. Ex. P-44; TD6 Tr. at 169, *l.* 18–20.
158. Mr. Pinto directed Keating to send this email directive to Nolt because, regardless of the language in the Contract Documents, Mr. Pinto had no reservations about it being within Keating’s authority to change or increase Nolt’s work. TD6 Tr. at 62, *l.* 2–12.
159. In response to a question by Nolt, Mr. Pinto confirmed that Keating had the authority to direct Nolt to proceed with this changed work. TD1 Tr. at 88, *l.* 2–17; TD4 Tr. at 153, *l.* 2–20; Ex. P-44.
160. The City did not inform Nolt that Keating did not have authority to change or increase work, or that Nolt should refrain from following future Keating directives. Ex. P-44.
161. At the time that Bulletin 7 was issued in March 2016, Nolt knew that Umoja would be the steel erector, but Nolt could not at that time finalize a subcontract with Umoja because the exact scope of the steel erection work was still in flux. TD1 Tr. at 92, *l.* 18 to pg. 93, *l.* 1.
162. With respect to a fabricator, Nolt had earlier planned to use East Coast Steel, but did not have a defined scope of work until the City (1) issued Bulletin 7, and (2) directed Nolt to proceed with the shop drawings. TD1 Tr. at 104, *l.* 24 to pg. 105, *l.* 4–9.
163. Nolt’s decision to change fabricators from East Coast Steel to RCC did not itself delay the Project, given that, without untoward and unreasonable risk to Nolt, the steel work could not proceed until Bulletin 7 and the direction to prepare shop drawings was issued. TD3 Tr. at 45, *l.* 3–13.

164. Mr. Pinto agreed that the time to finalize shop drawings began when the steel design was finalized. TD6 Tr. at 190, *l.* 20 to pg. 191, *l.* 1.
165. The Association for the Advancement of Cost Engineering International publishes guidelines which contain different Method Implementation Protocols (“MIP”) to perform a schedule analysis based on the nature of the project and data available. TD3 Tr. at 10, *l.* 16 to pg. 12, *l.* 10; Ex. P-263.
166. MIP 3.2 and MIP 3.6 could be used to make a schedule analysis without schedule updates.
167. Although Mr. Vosbikian (the City’s scheduling expert) criticized the use of an impacted as-planned methodology to measure schedule delays, he agreed that all methodologies require exercise of judgment and could be subject to bias depending on the professional judgment of the analyst. TD7 Tr. at 76, *l.* 19 to pg. 78, *l.* 9.
168. In performing a schedule analysis, it is not improper to utilize more than one MIP. TD3 Tr. at 16, *l.* 11–24; Ex. P-263 at 127.
169. The schedule updates could not necessarily be relied upon, but MIP 3.6 could be performed without “contemporaneous schedule updates.” TD3 Tr. at 15, *l.* 18 to pg. 16, *l.* 2; Ex. P-263 at 76.
170. An impacted as-planned analysis is provided for in MIP 3.6. TD3 Tr. at 15, *l.* 14–24.
171. An impacted as-planned analysis is the reasonable approach to use when there are no reliable schedule updates. TD5 Tr. at 10, *l.* 5–19.
172. This type of analysis facilitates understanding the potential impact of an event on a project. TD7 Tr. at 88, *l.* 18–25.

173. Because the Approved Baseline Schedule provided a duration of 142 days to procure steel subcontractors, prepare shop drawings and obtain approval of the drawings, Nolt ought to have been provided the same duration to perform these activities from March 7, 2016 when the design was finalized. TD1 Tr. at 93, *l.* 5–14, pg. 97, *l.* 9–18; Ex. P-35.
174. Structural steel fabrication could not reasonably begin until Nolt and the City signed a change order for Bulletin 7, and the structural steel shop drawings were approved. TD3 Tr. at 23, *l.* 21 to pg. 24, *l.* 6.
175. These events did not occur until July 18, 2016. TD3 Tr. at 24, *l.* 7–11.
176. Comparing the planned start of structural steel fabrication in the Approved Baseline Schedule to the actual start of structural steel fabrication on July 18, 2016, the result shows a 153-calendar-day delay to the start of structural steel fabrication. TD3 Tr. at 24, *l.* 13–17; Ex. PD-7.
177. The structural steel fabrication was on the critical path and, therefore, the Project was delayed by Bulletin 7. TD3 Tr. at 27, *l.* 11–15.
178. Comparing the planned start of structural steel shop drawings in the Approved Baseline Schedule to when the structural steel shop drawings could begin on March 7, 2016, the result shows a 166-calendar-day delay to the start of structural steel shop drawings. TD3 Tr. at 24, *l.* 18 to pg. 25, *l.* 6.
179. StCR § 26(c) states that the contractor “shall be entitled to a reasonable extension of time for unavoidable delays or interference in completion of the Contract caused by: any acts or omissions of the City . . . which occur subsequent to the issuance of the

- Notice to Proceed and which cause delay in completion of the contract, . . . by changes in the Plans and Technical Specifications.” Ex. D-1 at 63.
180. Because what came to be Bulletin 7 was an “act or omission of the City,” a “change in the Plans,” and a “change in Technical Specifications” that caused at least a 153-day delay, Nolt should have been granted an extension of the substantial completion date from December 16, 2016 until May 18, 2017. TD3 Tr. at 34, *l.* 9–19.
181. The delay until May 18, 2017 was an excusable delay as contemplated in StCR § 26(c) because Nolt’s actions or inactions did not cause the late issuance of Bulletin 7. TD3 Tr. at 34, *l.* 20 to pg. 35, *l.* 4.
182. In a period of excusable delay, an owner cannot assess liquidated damages for another, concurrent delay. TD3 Tr. at 48, *l.* 7 to pg. 49, *l.* 12.
183. In the construction industry, in the event that both an owner and a contractor are culpable, then the resulting delay would be excusable but not compensable. TD5 Tr. at 25, *l.* 18–25.
184. If an owner, even if not automatically because of its own acts, is at fault for the delay(s), it could still be liable for a compensable, excusable time extension, such as, for example, in the case of an unknown and unanticipated site condition. TD5 Tr. at 26, *l.* 19 to pg. 27, *l.* 14.
185. In effect, because it was so materially all-encompassing, Bulletin 7 essentially “reset the clock” on the structural steel portion of the work as if Nolt was upon its issuance just given a Notice to Proceed.
186. Nolt was entitled to its full approved duration for preparation of submittals, approval, and beginning fabrication of the structural steel.

187. By April 2016, even as the newly elected mayor (unbeknownst to Nolt) was aiming for a new and different location, the City had issued a dozen Bulletins to the Phase II design. Ex. P-57; TD1 Tr. at 109, *l.* 14–22.
188. Even though the Approved Baseline Schedule reflected that the steel would be installed prior to the roof activities, as a result of Bulletin 7 delaying the steel work, Nolt elected to remove the existing roof and to install the vapor barrier as a temporary roof. With the issuance of Bulletin 7 changes, Nolt then had to return to areas already roofed to re-roof penetrations once the steel was installed. TD4 Tr. at 109, *l.* 17–20.
189. In other words, Nolt planned to do the steel work before the roofing work, but due to the impacts on steel caused by the design changes, Nolt reasonably determined to demolish the old roof, and, in April and May 2016, install the vapor barrier as a temporary roof before the steel was complete. TD1 Tr. at 95, *l.* 18 to pg. 96, *l.* 9.
190. On March 8, 2016, Nolt submitted its first schedule update to the Approved Baseline Schedule. TD6 Tr. at 111, *l.* 8–11; Ex. D-143.
191. The Approved Baseline Schedule had been the only approved schedule submitted to the City as of the time of issuance of Bulletin 7. Ex. P-42; TD6 Tr. at 111, *l.* 3–11; pg. 120, *l.* 1–6.
192. As far as was presented to the Court, there was no other Project record that would permit the comparable calculation of delay caused by the issuance of Bulletin 7, other than the Approved Baseline Schedule. TD3 Tr. at 17, *l.* 12–18.
193. Mr. Hunt, Keating’s Project Director, testified that he believed there was “free float in the schedule to absorb all [of the] work” from Bulletin 7, but he also agreed that the



- Approved Baseline Schedule reported zero float for structural steel items. TD6 Tr. at 114, *l.* 25 to pg. 115, *l.* 4; pg. 122, *l.* 1–14; Ex. P-35.
194. Mr. Hunt testified that even one day of delay to the structural steel items that had “zero” float would result in a corresponding day-for-day delay of the completion of the Project. TD6 Tr. at 122, *l.* 15–22.
195. Mr. Pinto testified that if the structural steel design was finalized on March 7, based on the Approved Baseline Schedule, the duration to prepare and obtain approval for the structural steel shop drawings would be pushed out 142 days from March 7, 2016. TD6 Tr. 192, *l.* 1–17.
196. Because the direction to proceed with preparation of structural steel shop drawings in accordance with Bulletin 7 was not issued until March 7, 2016, the fabrication activity was already late as of the day the City issued Bulletin 7. TD3 Tr. at 27, *l.* 20 to pg. 28, *l.* 4.
197. At the time the City issued Bulletin 7, there appeared in the Approved Baseline Schedule a 166-day delay to the start of shop drawing preparation. TD3 Tr. at 60, *l.* 4–16; TD5 Tr. at 44, *l.* 11–16.
198. At the time Bulletin 7 was issued, Nolt reasonably did not know the full impact of the timing of, and work called for, in Bulletin 7 to the schedule. TD1 Tr. at 111, *l.* 21–23.
199. Likewise, and logically, because the critical path of any project, similar to Phase II in this Project, is typically through structural steel, the City and/or Keating knew, or reasonably should have anticipated, that by changing the steel design at the stage it was

changed here, there would be a notable delay to the completion of the Project. TD3 Tr. at 51, *l.* 23 to pg. 52, *l.* 1.

200. On March 16, 2016, Nolt informed the City that Nolt believed Bulletin 7 caused delay to its work, stating that it (Nolt) was reserving its rights to seek a time extension. TD1 Tr. at 101, *l.* 18 to pg. 102, *l.* 10; Ex. P-48; Ex. P-104 at 3–17; Ex. P-50.

201. Nolt substantively placed the City on notice of the delay pursuant to paragraph 26(e)(1) of the StCRs, and pursuant to direction the City gave at the start of the Project. Ex. D-1 at 64; TD1 Tr. at 102, *l.* 11–20.

202. In April 2016, Nolt reaffirmed in writing to the City Nolt’s claim to a time extension due to the issuance of Bulletin 7. Ex. P-57; TD1 Tr. at 109, *l.* 23 to pg. 110, *l.* 9.

203. By April 13, 2016, the City was routinely taking the position that all delays on the Project were solely the fault of Nolt and that the City bore no factual or legal responsibility for any delays on the Project. Ex. P-58; TD1 Tr. at 110, *l.* 20 to pg. 111, *l.* 20.

204. Mr. Pinto was peturbed by Nolt’s statements that it was putting the City on notice of delays, even though Nolt was required to do so under the Contract Documents. TD7 Tr. at 140, *l.* 21 to pg. 141, *l.* 1.

205. Regardless of documentation or discussion, the City’s position never changed: Nolt caused all delays on the Project. The City did not acknowledge the impact of the changes of the design by the issuance of Bulletin 7 nearly half of a year into the Project. TD5 Tr. at 45, *l.* 3–8. According to the City, Nolt bore all of the negative responsibility and the City bore none.

206. This was not a “design-build” project.

207. In December 2016, Nolt submitted the schedule analysis prepared by Envision to the City, which the City rejected—at which point Nolt engaged Russ Berner, P.E. to perform an independent time impact analysis to determine the cause of delays experienced on the Project. TD5 Tr. 54, *l.* 7–24; pg. 4, *l.* 1 to pg. 5, *l.* 2.
208. Every monthly schedule update submitted by Nolt was a “recovery schedule” because each update reflected changes in durations and sequence in order to accelerate the work, TD1 Tr. at 94, *l.* 12 to pg. 95, *l.* 4; pg. 98, *l.* 4–5; pg. 123, *l.* 25 to pg. 124, *l.* 8, and Mr. Pinto agreed that these schedule updates provided by Nolt were “recovery” schedules, TD7 Tr. at 144, *l.* 3–13.
209. In its schedule updates, Nolt showed shorter durations and modified sequences of work in order to meet the request for recovery schedules and acceleration. TD1 Tr. at 95, *l.* 13–17; TD5 Tr. at 34, *l.* 16–22.
210. Nolt’s Update No. 1 shortened the steel fabrication duration almost by half, from 98 to 50 days, even though the quantity of steel work had not decreased. TD6 Tr. at 111, *l.* 25 to pg. 112, *l.* 1.
211. Mr. Vosbikian agreed that by changing the sequence of work, as Nolt did, a contractor can accelerate its work. TD7 Tr. at 92, *l.* 8–14.
212. The updates showed that the same activities still had zero days of float, even though the activities had not yet begun. This was done in order to accelerate and recover delay. TD3 Tr. at 14, *l.* 19 to pg. 15, *l.* 6.
213. From the beginning of the Project, the critical path never changed insofar as it started with the structural steel activities and remained on the structural steel activities through the entire duration of the Project. TD3 Tr. at 21, *l.* 8–12.

214. While some activities on the critical path may have been addressed in different order, the nature of the activities that were on the critical path never changed. TD5 Tr. at 15, *l.* 14 to pg. 16, *l.* 12, pg. 22, *l.* 17–22.
215. The City contends that Nolt’s replacement of its steel subcontractor (from East Coast Steel to Umoja and RCC) delayed Nolt’s work, but the facts show that the delay caused by Bulletin 7 was the overarching delay, subsuming the likely delay from the change of subcontractors. TD5 Tr. at 14, *l.* 21 to pg. 15, *l.* 9; TD5 Tr. at 29, *l.* 21 to pg. 30, *l.* 11.
216. Mr. Vosbikian did not analyze whether a delay occurred as of March 2016 when Bulletin 7 was issued. TD7 Tr. at 90, *l.* 9 to pg. 91, *l.* 4.
217. Mr. Vosbikian contended that he performed an as-built analysis, but he incorporated Nolt’s acceleration and recovery efforts as reflected in the schedule updates as the basis of his analysis. TD3 Tr. at 66, *l.* 15–21.
218. In order to perform an as-built analysis under MIP 3.3, a schedule analyst needs to “validate the content” of the schedule updates in the interest of accuracy, and to ensure that they are not otherwise manipulated. TD3 Tr. at 42, *l.* 18 to pg. 43, *l.* 3; Ex. P-263 at 59.
219. Mr. Vosbikian did not validate the accuracy of the updates prior to relying on them to support his analysis, even though he acknowledged that the updated schedules had been manipulated. TD3 Tr. at 43, *l.* 8–24; TD7 Tr. at 96, *l.* 11–16.
220. Under the applicable industry protocols, the schedule updates ought not be used to perform a schedule analysis on the Project. TD3 Tr. at 15, *l.* 7–9.

221. As a result, the reliability of Mr. Vosbikian's conclusions regarding Bulletin 7 is open to serious question and, thus, unpersuasive because the data he used to support his conclusion are not helpful to determining the delay caused by Bulletin 7.
222. On May 2, 2016, Nolt submitted its cost impacts for Bulletin 7, reiterating that Nolt believed a time extension was necessary. Nolt requested a meeting with the City and Keating to discuss a "reasonable time extension." Ex. P-73; TD1 Tr. at 116, *l.* 2–20; TD2 Tr. at 136, *l.* 13–17; Ex. P-36; Ex. P-73. The City and Keating did not honor this request.
223. Upon review of Nolt's cost proposal for Bulletin 7, Mr. Pinto reduced it, and he did not meet with Nolt to discuss a time extension. TD1 Tr. at 115, *l.* 17–23; pg. 116, *l.* 5–11.
224. Nolt stated at trial that it accepted the City's position on direct costs only because the City made it clear to Nolt that the City's offer was "take-it-or-leave-it." The City's position was to pay only approximately 41% of what Nolt had requested. TD2 Tr. at 132, *l.* 24–25.
225. Nolt's reservation of rights pertained to an extension of time and the costs for the delay it contended was caused by Bulletin 7. TD6 Tr. at 12, *l.* 24 to pg. 13, *l.* 6.
226. Change Order 8, prepared by the City, was for the direct cost impacts of Bulletin 7, and specifically identified the cause as "design errors and omissions." Ex. P-73; TD1 Tr. at 114, *l.* 14–25; TD6 Tr. at 70, *l.* 15–25.
227. Nolt again reserved its rights to seek a time extension for Bulletin 7 on the face of Change Order No. 8. Ex. P-73.

228. On June 17, 2016, Mr. Pinto wrote to Mr. O'Brien that Nolt did not "need to write on the change orders" in order to reserve its right to seek a time extension. Ex. D-300; TD8 Tr. at 62, *l.* 6–25.
229. Because the City refused to consider any change order with written notations on it, Change Order 8 included with it a June 13, 2016 letter from Mr. O'Brien to Mr. Pinto again stating that Nolt "reserve[s] the right to pursue an appropriate time extension" for Bulletin 7. TD1 Tr. at 117, *l.* 24 to pg. 119, *l.* 18; Ex. D-300.
230. Mr. Pinto testified that he had a full and complete understanding that Nolt reserved its rights to seek a time extension at a later date for impacts caused by Bulletin 7. TD8 Tr. at 63, *l.* 1–9.
231. Change Order No. 8 was signed by all parties on July 26, 2016, in a format acceptable to the City. Ex. P-74; TD1 Tr. at 119, *l.* 19–25.
232. At the time of executing Change Order 8, Nolt knew that it would need at least a 142-day extension to complete its work, given that it could not know the full impact of the Bulletin 7 delay until the steel was completed, and to do that, Nolt would need to coordinate with its subcontractors to plan for fabrication of the steel, including finalizing contractual agreements. TD2 Tr. at 136, *l.* 4–8; TD5 Tr. at 13, *l.* 12–19; Ex. P-76 at 1.
233. On July 14, 2016, RCC prepared shop drawings for the structural steel, which were approved by the City. TD1 Tr. at 112, *l.* 13 to pg. 113, *l.* 8; Ex. P-80.
234. After Bulletin 7 was issued, Nolt secured approved shop drawings within the 142-day duration allotted in the Approved Baseline Schedule. TD1 Tr. at 113, *l.* 9–12.

235. But fabrication could not proceed until after July 14, 2016, when Change Order 8 was executed, and the structural steel shop drawings were approved. TD3 Tr. at 22, *l.* 17–23.
236. In January 2017, Nolt provided notice to the City of a general cost impact of at least \$300,000 resulting from Bulletin 7 delays. TD6 Tr. at 13, *l.* 21 to pg. 14, *l.* 13; Ex. P-101 at 2.
237. In February 2017, Nolt advised the City that it believed it was entitled to at least an extension of 102 calendar days. Ex. P-106; TD6 Tr. at 16, *l.* 25 to pg. 17, *l.* 23.
238. Nolt requested a meeting with the City after the Project was completed in order to discuss a formal, after-the-fact time extension, but the City never responded to this request. TD6 Tr. at 17, *l.* 24 to pg. 18, *l.* 12; Ex. P-106.
239. Nolt agreed to retain Umoja to perform the steel work, with an agreement by Umoja that RCC would serve as the steel fabricator. TD1 Tr. at 112, *l.* 5–12.
240. Although the subcontract with Umoja was not signed until November 14, 2016, Umoja and RCC worked a substantial time on the Project before the written agreement was executed. TD1 Tr. at 120, *l.* 8 to pg. 121, *l.* 4; Ex. P-78.
241. When Change Order 8 was signed by all parties, Nolt was aware that it was at risk for of \$10,000 per day in liquidated damages if Nolt did not substantially complete its work by December 16, 2016. TD5 Tr. at 50, *l.* 23–24, pg. 51, *l.* 3–5.
242. Mr. Vosbikian testified that if an owner was the cause of an event that caused a delay, and a contractor accelerates its work to mitigate the attendant delay, the owner is responsible for the acceleration costs. TD7 Tr. at 93, *l.* 23 to pg. 94, *l.* 2.

243. As soon as the steel shop drawings and Change Order 8 were approved, Nolt accelerated its work to meet the December 16, 2016 substantial completion deadline.

TD3 Tr. at 38, *l.* 19 to pg. 39, *l.* 1.

244. Mr. Vosbikian testified that while Nolt planned to install the steel before performing roof work, Nolt actually performed the roof demolition prior to commencing steel installation in order to accelerate its work. TD7 Tr. at 27, *l.* 17–25.

245. Mr. Vosbikian acknowledged that Nolt attempted to mitigate delays by working out-of-sequence. TD7 Tr. at 93, *l.* 5–11.

246. RCC began delivering steel to the Project in September 2016. TD1 Tr. at 122, *l.* 24 to pg. 123, *l.* 4.

247. Mr. Pizzo was in the field during Nolt’s installation of the temporary roof and the permanent roof. TD9 Tr. at 36, *l.* 19–22.

248. Umoja and RCC experienced some difficulties in connection with the structural steel, but, even so, the primary cause of delays on the Project arose from Bulletin 7 because the late design changes prevented completion of Nolt’s shop drawings, and ultimately impacted completion of the roof work. TD4 Tr. at 114, *l.* 16 to pg. 115, *l.* 7.

**V. Nolt substantially finishes the Project by the original deadline,  
but the City refuses to accept the roof**

249. The StCRs § 1(uu) define “substantial completion” to mean that (a) the work could be used or occupied or operated for its intended use; and (b) all applicable permits and license, including if applicable, a statement or certificate of occupancy shall have been duly issued by all Governing office, including those of the City. And it also states that “in no event shall the contract be certified as substantially complete until the contractor



has completed at least 90 percent of the work.” Ex. D-1 at 56; TD1 Tr. at 138, *l.* 1–6, 20–24; pg. 139, *l.* 2–5.

250. On December 16, 2016, Nolt wrote to the City that it was “substantially complete,” was submitting an Application for Semi-Final Estimate, and was requesting a punchlist. Ex. D-455 at 1.

251. On December 22, 2016, the City acknowledged receipt of Nolt’s application for substantial completion and listed the other “contract items [that] are required prior to attaining Substantial Completion,” including warranties, permits, and a list of incomplete work. Ex. D-461 at 1–2. The City also noted concerns about leaks from the roof and attached a Keating diagram of roof leaks. Ex. D-461 at 1, 8. The City informed Nolt that the City would be withholding 10% on certain items because of the City’s leak-related concerns. Ex. P-95 at 1.

252. Nolt’s work was not 100% complete as of December 16, 2016, but 100% completeness is not a requirement for meeting the contractual “substantial completion” milestone. TD1 Tr. at 143, *l.* 19–20.

253. On December 16, 2016, all applicable permits and licenses had been issued. TD1 Tr. at 138, *l.* 24 to pg. 139, *l.* 1.

254. On December 16, 2016, the City could use the work performed by Nolt for its intended purpose, namely, to allow for the continuation to and of the Phase III construction activities. TD1 Tr. at 138, *l.* 7–19; TD3 Tr. at 36, *l.* 17–26; TD4 Tr. at 116, *l.* 3–8.

255. As of December 16, 2016, the only remaining roof work that Mr. Pinto identified as being incomplete was some flashing, coping, and clean-up, which are finishing

- components frequently completed as part of the punchlist. TD6 Tr. at 78, *l.* 4–12; pg. 79, *l.* 3–6; D-450.
256. For its December 2016 pay application, Payment Application #15, Nolt asserted, and Keating agreed, that Nolt had completed over 96% of the work. TD1 Tr. at 141, *l.* 8–13; Ex. P-95.
257. In Payment Application #15, Keating approved for payment 90% of the steel and roofing work as being completed. Ex. P-95, TD1 Tr. at 145, *l.* 4–11.
258. The City approved Payment Application #15 on January 13, 2017 for payment to Nolt. By so doing, under the Contract Mr. Lowe certified that the work completed to date was performed in accordance with the plans and specifications. Ex. P-99; TD1 Tr. at 146, *l.* 1–15.
259. Nolt submitted a semi-final estimate, which under the StCR § 56 occurs at the time of substantial completion. Ex. P-92; TD1 Tr. at 135, *l.* 17 to pg. 126, *l.* 4; Ex. D-1 at 78–79.
260. Mr. Pinto demanded that Nolt fully satisfy the “Payment Procedures” Specification before he would accept the work as substantially completed. Ex. P-94; TD8 Tr. at 3, *l.* 24 to pg. 4, *l.* 24.
261. However, as stated, the items in the Specification that Mr. Pinto delineated are required for final completion, not substantial completion. TD1 Tr. at 150, *l.* 11–20.
262. Mr. Pinto also stated that a roof warranty was required prior to the City accepting the roof as “substantially complete.” TD8 Tr. at 6, *l.* 2–9.
263. At trial, the City failed to provide any evidence that a roof warranty was required for substantial completion. TD7 Tr. at 114, *l.* 23 to pg. 115, *l.* 1.

264. Notwithstanding its initial reservations, the City approved and paid Nolt for Payment Application #15 without any reservation for completion of the items in the “Payment Procedures” Specification as a condition for considering the Project substantially complete. TD8 Tr. at 9, *l.* 21 to pg. 10, *l.* 9.
265. Mr. Pinto believed that the existence of water leaks in the building was a justifiable basis to conclude that Nolt was not substantially complete. The City, however, made no determination of the source of any water infiltration. TD1 Tr. at 142, *l.* 13–15; pg. 144, *l.* 1–8.
266. As part of his conclusion that Nolt was not substantially complete and had inexcusably delayed the Project, Mr. Vosbikian asserted that Nolt was responsible for causing moisture to penetrate the roof system and, thus, to leak into the building. TD7 Tr. at 103, *l.* 7–14.
267. Mr. Vosbikian is not a roofing expert, TD7 Tr. at 107, *l.* 5–10, and he performed no independent analysis of the source of any water infiltration, *id.* at 101, *l.* 1 to pg. 102, *l.* 5; pg. 112, 5–11.
268. Mr. Pinto testified that he would not verify that 90% of the work was complete until Nolt took 1’x1’ samples in February 2018, even though the taking of 1’x1’ samples is not a contractually obligated condition in the Contract Documents to achieve substantial completion. TD8 Tr. at 14, *l.* 3–12.
269. Keating personnel and Mr. Pizzo informed Mr. Knauff that they had the authority to instruct Nolt on what work to complete, including extra work. TD4 Tr. at 152, *l.* 3–14.

270. Mr. Pizzo directed the means and methods of Nolt's workers and subcontractors.

TD4 Tr. at 168, *l.* 25 to pg. 169, *l.* 9.

271. Mr. Knauff informed Keating, the City and Mr. Pizzo in December 2016 that Mr.

Pizzo should not speak directly with Nolt's workers or subcontractors concerning their work but instead should speak to Nolt management, such as Mr. Knauff or Mr. O'Brien, about any Project work-related matters. Ex. P-90; TD4 Tr. at 169, *l.* 16–23; TD1 Tr. at 131, *l.* 23 to pg. 133, *l.* 14.

272. Keating, however, instead told Nolt that if Nolt did not follow Mr. Pizzo's direction

then Mr. Pizzo would issue a Non-Compliance Report ("NCR"). Ex. P-90; TD6 Tr. at 135, *l.* 17 to pg. 136, *l.* 4; TD1 Tr. at 133, *l.* 15 to pg. 134, *l.* 24.

273. Nolt was expected to correct any condition reported in an NCR. TD6 Tr. a 136, *l.*

5–7.

274. The City did not question Mr. Pizzo's claim that he was not directing Nolt's work,

even though the complaints by Nolt came from multiple employees of Nolt. TD8 Tr. at 39, *l.* 8–23.

275. Mr. Pizzo testified that he witnessed water entering the building, TD9 Tr. at 10, *l.*

12–16, and took pictures of the water on the floor of the building, *id.* at *l.* 18–21. Mr. Pizzo inspected the roof and fifth floor of the interior building after each rain event. He took photographs and put his observations into an email or daily report. *Id.* at *l.* 9–21. After observing water on the fifth floor, Mr. Pizzo would also visually inspect the roof deck visible from the fifth floor and walk the roof to check for openings in the areas through which water could be leaking. *Id.* at 59, *l.* 12–17. If a leak appeared to be coming from a pipe, Pizzo would inspect the roof drain sump. *Id.* at 69, *l.* 3–13.

276. On November 29, 2016, Mr. Pizzo reported that there was “water leaking through to fifth floor under area 7, 1, and 3.” Ex. D-432.

277. On January 2, 2017, Mr. Pizzo reported that “roof areas continue to leak with area 2 starting to leak again. Areas 1, 2, 3, 5, 6, 7, 8, and 9.” Ex. D-465 at 1; *see also* Ex. D-469 at 23. On January 4, 2017, Nolt replied that it was continuing to regularly “investigate the source of the leaks.” Ex. D-465 at 1. Nolt also acknowledged that some of the leaks were caused by incomplete roofing work, including incomplete flashings. *Id.*

278. The City then wrote a January 12, 2017 letter to Nolt regarding Nolt’s performance on the Project including roof leaks, Ex. D-469 at 2, to which Nolt replied on January 25, 2017 that Nolt was working to “resolve the conditions that are attributable to any building envelope issues that are allowing water to infiltrate the building,” Ex. P-101 at 2.

279. Mr. Lowe did not have first-hand knowledge of the leaks allegedly in the building but rather relied on reports from Mr. Pizzo as to the location of “puddles” on the floor, which he (Mr. Lowe) described in arguably exaggerated detail. TD2 Tr. at 6, *l.* 20–24; Ex. P-238 at 1–12; Ex. D-469; TD2 Tr. at 5, *l.* 5 to pg. 6, *l.* 19.

280. Upon receiving Mr. Lowe’s January 12, 2017 letter, Nolt deployed employees to locate and identify the possible sources of the leaks. TD2 Tr. at 6, *l.* 25 to pg. 7, *l.* 4.

281. Mr. Pizzo also identified plumbing leaks from water that was dripping from bands installed by John Bee in the leader piping running throughout the fifth floor. TD9 Tr. at 12, *l.* 20 to pg. 13, *l.* 2; Ex. P-108 at 2.

282. Too much moisture in a roof system is undesirable because it can reduce insulation value and reduce the lifespan of the roof. TD4 Tr. 96, *l.* 6–16; TD4 Tr. at 87, *l.* 20 to 88, *l.* 4. In addition, such moisture in a roofing system can make its way into the building itself. TD8 Tr. at 88, *l.* 5–15.

283. Water can infiltrate a roofing system for a variety of reasons, including (but not solely) workmanship issues related to installation of the roof. TD4 Tr. 50, *l.* 22 to pg. 51, *l.* 2.

284. The City never provided a hypothesis, explanation, or investigation as to the source of the water reported in the building. TD2 Tr. at 4, *l.* 1–7.

285. As of January 12, 2017, there was no determination as to the source of the leaking water found in the building, and there was no determination as to whether the water infiltration came from areas in Nolt’s scope of work or areas excluded from Nolt’s scope of work, whether it came from defective work performed by Nolt, or from roof areas where Nolt still needed to install metal flashing, or from work performed by John Bee, or from otherwise unknown sources. TD2 Tr. at 11, *l.* 12 to pg. 12, *l.* 3.

286. A representative of Siplast, the roofing manufacturer on the Project, regularly visited the site while the new roof was being installed and while repairs were made. The representative recorded his observations in reports, which were then sent to Mr. Knauff, who reviewed them and sent them on to Nolt, the City, and Keating. TD4 Tr. 154, *l.* 25 to pg. 156, *l.* 2.

287. On February 14, 2017, Siplast conducted an inspection of the roof areas that were listed as complete. Ex. D-505 at 1. The Siplast representative noted that “[o]n all of the roof areas, there are open laps in the Veral flashings and the finish plies. All of the laps

will need to be probed, checked, and sealed. Some wrinkles and air pockets need to be cut out and patched. There is still work being performed on the finished roof areas and there is no protection. I explained to Chuck [Knauff] that those areas will need to be checked for damage prior to the final walk-through and should be protected in the interim.” *Id.* at 1-2.

288. Nolt complied with all Siplast inspection reports and directions to Siplast’s satisfaction. TD2 Tr. at 35, *l.* 5–7; TD4 Tr. at 172, *l.* 21–22.

289. The November 29, 2016 Siplast Inspection Report, which immediately preceded the substantial completion date, had made reference to base flashing that needed to be completed, but did not identify the location. Ex. D-431; TD4 Tr. at 159, *l.* 7–16.

290. While a February 14, 2017 Siplast Inspection Report identified open laps in the Veral flashing, and wrinkles, the report did not identify the location, quantity or size of the cited conditions. TD4 Tr. at 160, *l.* 6–12; pg. 171, *l.* 22 to pg. 172, *l.* 15; Ex. D-505.

291. The February 14, 2017 Siplast Report also identified ponding water, but the ponding was due to a design defect for which Nolt was not liable and was resolved through extra work performed by Nolt to install additional roof drains. TD4 Tr. at 171, *l.* 9–2.

292. On February 15, 2017, Mr. Lowe provided Nolt with a his survey of leaks and water infiltration, Ex. P-108; TD2 Tr. at 12, *l.* 4–21, showing twelve (12) areas where water appeared on the floor of the fifth floor, Ex. P-108 at 2; Ex. PD-6; TD2 Tr. at 13, *l.* 12 to pg. 14, *l.* 3.

293. One of the identified leaks was located directly at the southeast corner of Roof Area 2, which was an area where Nolt’s scope of work did not include a full replacement of

the roof, i.e., the “pop-ups” which were excluded from Nolt’s scope of work. Ex. P-108 at 2; Ex. PD-6; TD2 Tr. at 14, *l.* 15–20.

294. A second identified leak according to Mr. Lowe’s survey was in the proximity of Roof Area 8, which was an area where Nolt’s work did not include a full replacement, i.e., again, the pop-ups, which were excluded from Nolt’s scope of work. Ex. P-108 at 2; Ex. PD-6; TD2 Tr. at 14, *l.* 21–22.

295. The Lowe survey identified four locations of “saturated columns.” Ex. P-108 at 2; Ex. PD-6; TD2 Tr. at 14, *l.* 4–7.

296. Finally, his survey identified plumbing band leaks, which appeared to be work performed by John Bee and outside of Nolt’s scope of work. Ex. P-108 at 2; Ex. PD-6; TD2 Tr. at 14, *l.* 8–10.

**VI. The City requires Nolt to replace almost half of the roof  
without proof that Nolt’s work caused any leaks**

297. On February 15, 2017, and again on March 1, 2017, the City informed Nolt that it was going to “retain an independent firm to conduct an infrared survey of the entire roof as part of the investigation of [Nolt’s] work” and that Nolt would be backcharged for the costs of the investigation should “moisture be found below the surfaces of the roof work installed by D.A. Nolt, Inc.” Ex. P-108 at 1; *see also* TD2 Tr. at 15, *l.* 3 to pg. 16, *l.* 1; Ex. D-671.

298. The City retained Steven McLaughlin Roofing Consultant, which had experience in conducting infrared scans, such as for a roof like the one installed on this Project. TD2 Tr. at 16, *l.* 2–8.

299. Despite the acknowledgement of plumbing leaks, unlike with the leaks it suspected from the roof work, the City did not hire a third-party company to inspect the plumbing



- work to determine if the plumbing bands or any other plumbing deficiencies were a cause of water infiltration into the building. TD8 Tr. at 15, *l.* 21 to pg. 16, *l.* 4.
300. The City did not retain a third-party inspector to review the roof installation to determine whether it complied with the plans and specifications. TD8 Tr. at 16, *l.* 5–9.
301. The City did not ask either the roof designer, Klein & Hoffman, or Ballinger to perform an inspection to try to determine the source of the water infiltration into the building. TD8 Tr. at 16, *l.* 17–22.
302. The American Society of Testing and Materials (“ASTM”) is an internationally recognized organization that issues and publishes standards for testing roof materials, which are considered and accepted as the industry standard for testing protocols. TD4 Tr. at 27, *l.* 18 to pg. 28, *l.* 18.
303. ASTM C1153 provides: “Verification of infrared data must be carried out by the following invasive test methods: Cores or cores and moisture meter probe.” Ex. P-233 at § 13.1.
304. An infrared scan detects thermal anomalies in a roofing system, which may or may not be due to moisture. TD4 Tr. at 24, *l.* 4–23. Infrared scans can miss excessive moisture in roofing systems. *Id.* at 77, *l.* 20–22.
305. While areas of a roof that contain excessive moisture typically will be reflected in an infrared scan as retaining heat, it is accepted within the industry that an infrared scan does not identify any particular level of moisture. Rather, supplemental testing of the area reflected in the scan as retaining heat must be conducted in order to verify whether excessive moisture was the cause for the retention of heat. TD2 Tr. at 17, *l.* 1–7; TD4 Tr. at 25, *l.* 20 to pg. 26, *l.* 6; TD4 Tr. at 25, *l.* 13–19.

306. Supplemental testing is required because there are many causes for retained heat in a roof system other than moisture, including the presence of metal, an area with a thicker roofing system, a pile of gravel, or the proximity of an exhaust vent. TD2 Tr. at 17, *l.* 11–22; TD4 Tr. at 22, *l.* 17–20; TD10 Tr. at 43, *l.* 13–24.
307. Different building materials retain heat longer than others. For example, a masonry wall will absorb more heat which may impact the infrared reading of an adjacent section of roof. TD4 Tr. at 25, *l.* 6–12.
308. In order to identify the presence of moisture after an infrared scan, “destructive testing,” such as the taking of a core sample, or use of a moisture probe, or both, is required. TD4 Tr. at 26, *l.* 1–6; TD4 Tr. at 29, *l.* 13 to pg. 20, *l.* 6; Ex. P-233.
309. A “core” is “a small sample encompassing at least 13 cm<sup>2</sup> of the roof surface area taken by cutting through the roof membrane and insulation and removing the insulation to determine its composition condition and moisture content.” Ex. P-233 at Section 3.1.2.
310. Even when a core sample is taken it would still need to be tested with a moisture meter/probe, or sent to a laboratory in order to quantify the moisture content within the core sample. TD4 Tr. at 92, *l.* 22 to pg. 93, *l.* 2; pg. 93, *l.* 14–19.
311. A “moisture meter probe” is “an invasive electrical resistance or galvanometric type test that entails the insertion of a meter probes through the roof membrane to indicate the presence of moisture within the roofing system.” Ex. P-233 at § 3.1.11.
312. ASTM C1153-10 section 3.1.1 provides guidance on the type of moisture meter that should be used to probe an area after an infrared scan, and permits use of either an electrical resistance meter or galvanometric meter. TD4 Tr. at 30, *l.* 21–25.

313. The most common moisture probe (meter) is the Delmhorst meter, which, when used to measure moisture in roofing materials, provides a gradation of data from zero (0) to one hundred (100). TD4 Tr. at 21, *l.* 9–22.
314. Typically, a reading on a Delmhorst meter of zero to 40 means that the roofing material is considered “dry.” TD4 Tr. at 31, *l.* 23–25.
315. A reading on a Delmhorst meter of 80-100 means that the material is “wet”, with a reading of 100 meaning the material is saturated. TD4 Tr. at 32, *l.* 2–3.
316. While saturated roofing material is considered “damaged” and in need of replacement, readings from the Delmhorst meter that are considered “dry” would reflect only an insignificant level of moisture which would not be “damaged” or in need of replacement. TD4 Tr. at 33, *l.* 19 to pg. 34, *l.* 2.
317. A laboratory can test the insulation material to determine the moisture content by weighing the sample, then oven-drying the sample and re-weighing the sample to determine the difference in weight. TD4 Tr. at 47, *l.* 24 to pg. 48, *l.* 5.
318. On or about March 29, 2017, McLaughlin performed the infrared scan on the roof. Ex. P-120, TD2 Tr. at 18, *l.* 1–8.
319. McLaughlin then conducted testing of the roof in early April 2017 with more infrared scans on April 4, 6, and 10. McLaughlin removed cores, again using Nolt’s workers, on April 10 and 11. Ex. P-126 at 2. McLaughlin also performed moisture readings. *Id.* Representatives of Nolt were present for McLaughlin’s testing of the roof. TD1 Tr. 18, *l.* 16–22.
320. McLaughlin’s infrared scan showed areas of anomaly. In order to verify the presence of moisture as an explanation for the anomaly, at a later date, McLaughlin

performed moisture probes and took core samples within the areas of anomaly. TD2 Tr. at 18, *l.* 19 to pg. 19, *l.* 7; Ex. P-255; TD4 Tr. at 35, *l.* 17–21; TD4 Tr. at 119, *l.* 11–12.

321. McLaughlin reported that sections of Roof Areas 5 and 7 were confirmed to contain moisture and recommended that “the removal area must be extended until all wet insulation has been removed.” Ex. P-126 at 3. When roof cores were taken, some were found to be wet, others dry, and at least one dry core “had water beneath the insulation.” *Id.* at 1–2.

322. Following the results of McLaughlin’s activities, Nolt proceeded to tear-up and replace designated portions of Areas 5 and 7. *See* TD4 Tr. 69, *l.* 2–5; Ex. D-532 at 1.

323. On April 20, 2017, McLaughlin sent his report to Mr. Pinto. TD8 Tr. at 17, *l.* 6–9; Ex. P-129.

324. Nolt asked the City to give Nolt a copy of the McLaughlin Report, and the City at first advised Nolt that it would provide a copy once it was prepared. TD2 Tr. at 20, *l.* 8–11.

325. But, despite Nolt’s request and the City’s initial response, the City never provided a copy of the McLaughlin Report to Nolt. TD2 Tr. at 18, *l.* 11–15; TD4 Tr. at 119, *l.* 5–7; Ex. P-120.

326. Mr. Lowe rejected the McLaughlin Report because he thought it was “vague and misleading.” Ex. P-129.

327. Rather than asking Mr. McLaughlin to clarify his supposedly “vague and misleading” report or address Mr. Lowe’s concerns, the City “released,” i.e. dismissed, Mr. McLaughlin from investigation duties. TD8 Tr. at 18, *l.* 9 to pg. 19, *l.* 5; Ex. P-129.

328. To reiterate, the McLaughlin Report had identified two areas of roof that potentially contained moisture which were later confirmed to contain excessive moisture as a result of the core samples and testing conducted by McLaughlin. Ex. P-126; Ex. P-255; TD2 Tr. at 21, *l.* 6–13; TD4 Tr. at 36, *l.* 2–5.
329. The areas requiring replacement based on McLaughlin’s testing were spray painted on the roof. TD4 Tr. at 44, *l.* 8–13; TD2 Tr. at 24, *l.* 16–19.
330. Nolt agreed to remove and did replace the painted areas. TD4 Tr. at 120, *l.* 11–13.
331. The McLaughlin Report did not identify any obvious defects, penetrations, opening, tears, rips or other sources for the water to enter into the roof system. TD2 Tr. at 22, *l.* 24 to pg. 23, *l.* 11.
332. Nolt began replacement work with Area 5. At least some of the roofing replaced by Nolt in Area 5 contained excessive moisture, including standing water. Ex. D-533; Ex. P-238 at 27; TD4 Tr. at 120, *l.* 18 to 122, *l.* 8.
333. The McLaughlin Report had identified an 8’x40’ area in Roof Area 5 that was confirmed to be wet after three moisture probes in the 8’x40’ area was tested. TD2 Tr. at 22, *l.* 1–4; Ex. P-126; Ex. P-255.
334. Mr. McLaughlin performed six other probes in Roof Area 5 and each were confirmed to be dry. Thus, other than the 8’x40’ area identified, Mr. McLaughlin’s testing confirmed the remainder of Roof Area 5 to be dry.
335. Mr. Pizzo nonetheless directed Nolt to remove more areas of Roof Area 5 than had been identified for removal by McLaughlin. TD4 Tr. at 120, *l.* 18 to pg. 121, *l.* 11; Ex. P-238 at 27.

336. Specifically, Mr. Pizzo instructed Nolt to remove some areas in Roof Area 5 where the insulation was still firmly adhered to the vapor barrier, suggesting “dry” conditions. TD4 Tr. at 122, 9–23; Ex. P238 at 26.
337. Roof Area 7 was described as about three times the size of the courtroom where this trial was conducted. TD2 Tr. at 23, *l.* 20–24.
338. The McLaughlin Report identified an 8’x8’ area in Roof Area 7 that contained excess moisture as confirmed by a moisture probe. TD2 Tr. at 21, *l.* 14–19; Ex. P-126; Ex. P-255.
339. Mr. McLaughlin took three other moisture probes of Roof Area 7. Each of these three moisture probes confirmed that the remainder of Roof Area 7 was dry. TD2 Tr. at 21, *l.* 19–25.
340. Mr. Brasberger, Keating’s field superintendent, left the Project in late 2016. TD9 Tr. at 49, *l.* 12–14; pg. 50, *l.* 12–17.
341. When he left the Project, Mr. Brasberger instructed Mr. Pizzo to “work with Nolt,” which Mr. Pizzo interpreted to mean that he should discuss any concerns or observations with Nolt’s supervisor directly, in the field. TD9 Tr. at 49, *l.* 19 to pg. 50, *l.* 1; TD9 Tr. at 52, *l.* 22 to pg. 53, *l.* 7.
342. While StCR § 66 states that the Project Manager may reject work and require Nolt to remove and replace it, the Special Contract Requirement, § 1.2(a)(1)fff also provides that “the Construction Manager shall have the authority to reject any work not in conformance with the Contract Documents.” Ex. D-1 at 82, 99. There is nothing in the Contract Documents to suggest neither the Project Architect nor the Project Manager

nor the Construction Manager can exercise this authority without a good faith basis to do so.

343. No City or Keating representative other than Mr. Pizzo was involved in the determination of whether roofing material was “wet” and therefore rejected; the decision was solely based on Mr. Pizzo’s subjective observations alone.

344. If Mr. Pizzo believed an area of roof material was wet based on his visual observation or by touching the observed area with his hand, Mr. Pizzo would instruct Nolt to remove what he designated was the affected area. TD4 Tr. at 126, *l.* 12–18.

345. For example, on Roof Area 5, at Mr. Pizzo’s express direction, Nolt removed up to a third of the roof down to the vapor barrier. TD2 Tr. at 26, *l.* 16–20, pg. 27, *l.* 7–10.

346. As Nolt was removing the area marked in paint on Roof Area 7, Mr. Pizzo instructed that Nolt continue to tear away more roofing sections because he contended the sections were wet. TD4 Tr. at 126, *l.* 19–24.

347. Despite the McLaughlin Report findings, the City did not investigate to make a determination as to the source of the moisture in the locations identified by McLaughlin. The City made no effort to investigate the source of the water despite the location of the roof drains and, therefore, the City (and, later at this trial, the Court as fact-finder) could not rule out that the source of the water emanated from the work performed or to be performed by John Bee or some other unexplained cause. TD2 Tr. at 24, *l.* 20–25.

348. In the field, Mr. Knauff disagreed with Mr. Pizzo’s insistence that areas beyond those marked by McLaughlin as a result of the roof scanning were wet and required removal and replacement. TD4 Tr. at 127, *l.* 19–23.

349. Therefore, in Roof Areas 7 and 5, at Mr. Pizzo's direction, Nolt had to remove significantly more material. TD2 Tr. at 25, *l.* 13–21.
350. Mr. Pizzo directed Nolt to continue to remove roofing beyond the 8'x8' area and away from the structural steel structure. TD4 Tr. at 12, *l.* 25 to pg. 127, *l.* 14; P-238 at 31.
351. On April 27, 2017, the removal activities extended at least 20 feet at one point beyond the area identified by McLaughlin, although there was no visible moisture justifying extension of the replacement areas. TD4 Tr. at 128, *l.* 8–9; TD4 Tr. at 127, *l.* 25 to pg. 128, *l.* 7; Ex. P-238 at 31.
352. By May 10, 2017, Nolt had removed and started to replace roofing at the other end of Roof Area 7 near the building, which was beyond where the McLaughlin testing had revealed some moisture damage. At this location, McLaughlin had not identified any area for removal. TD4 Tr. at 129, *l.* 11–13; Ex. P-255; TD4 Tr. at 128, *l.* 13 to pg. 129, *l.* 8; Ex. P-238 at 25–36.
353. Despite the findings contained in the McLaughlin Report, Nolt continued to remove roofing in Roof Area 7 at the direction of Mr. Pizzo. TD4 Tr. at 129, *l.* 9–10.
354. Even though the McLaughlin Report had identified only a single 8'x8' area for replacement after cores and probes were taken throughout Area 7, Mr. Pizzo directed Nolt to remove and replace almost the entirety of Roof Area 7, except for a 24" section around the perimeter. TD2 Tr. at 26, *l.* 10–15.
355. Ultimately, at Mr. Pizzo's direction, Nolt removed and replaced up to 85% of Roof Area 7 down to the vapor barrier. TD4 Tr. at 123, *l.* 17–22; TD2 Tr. at 26, *l.* 16–20.



356. At trial, Mr. Pizzo testified that he could not tell by a photograph whether an area of removed roof is wet or dry, TD9 Tr. at 47, *l.* 20 to pg. 48, *l.* 7, and he acknowledged that the only way he identified areas that he believed were wet was through visual observation or using his fingers to rub an area of roofing material. TD4 Tr. at 126, *l.* 10–16; TD9 Tr. at 16, *l.* 7–18.

357. Neither Mr. Pizzo, nor anyone else from the City or Keating, was onsite with a moisture meter to test for moisture. TD2 Tr. at 26, *l.* 21–23; TD4 Tr. at 126, *l.* 7–9.

358. No one from the City or Keating took additional core samples of the areas beyond the two areas specifically identified by McLaughlin. TD2 Tr. at 26, *l.* 24 to pg. 27, *l.* 1.

359. All areas beyond those identified by McLaughlin were removed and replaced at the direction of Mr. Pizzo, and the City is responsible to pay the costs of that work pursuant to StCR § 65. TD2 Tr. at 28, *l.* 16 to pg. 29, *l.* 7.

360. Although Nolt disputed that areas outside of those identified by McLaughlin required replacement, TD2 Tr. at 28, *l.* 2–5, Nolt could not reasonably devote time to trying to persuade the City to resolve such a dispute, so it removed the areas beyond those identified by McLaughlin because Nolt was instructed to do so and was at risk to be assessed with a \$10,000 per day in liquidated damages for each day of delay, TD2 Tr. at 28, *l.* 2–5, 9–15.

361. Nolt is not seeking compensation for the cost of removing roof areas within those areas identified by McLaughlin. TD2 Tr. at 28, *l.* 6–8.

362. Prior to issuing a roof warranty, a manufacturer frequently inspects the work to make sure it is installed in accordance with the manufacturer's requirements. TD2 Tr.

at 30, *l.* 24 to pg. 31, *l.* 11; pg. 31, *l.* 15–21; TD4 Tr. at 172, *l.* 18–20; TD10 Tr. at 68, *l.* 7–17.

363. An April 20, 2017 Siplast Inspection Report (the “April 20 Siplast Report”) identified loose or dry laps but did not identify the quantity, size or locations of same. TD4 Tr. at 164, *l.* 6–10; Ex. D-536.

364. On May 23, 2017, Siplast performed a final inspection of the roof systems and promptly issued warranties for both roof systems. Ex. P-143; Ex. P-146; TD2 Tr. at 35, *l.* 23 to pg. 36, *l.* 8; pg. 75, *l.* 7–11.

365. Siplast guaranteed that for 30 years the two-ply modified roof system installed by Nolt on the Project would be in a watertight condition, Ex. P-143; TD2 Tr. at 36, *l.* 12–18; pg. 75, *l.* 8–10, and that the liquid-applied roofing system would be water tight for 20 years, TD2 Tr. at 75, *l.* 11–14.

366. On June 6, 2017, Siplast issued a warranty to Nolt for its roof work on the Project. P-143. However, the City refused to accept the warranty (or the roof) until the alleged ongoing water infiltration was remedied to the City’s satisfaction. Ex. D-576 at 1.

367. By May 23, 2017, Nolt performed replacement work directed by the City after the McLaughlin testing and supplied a manufacturer-guaranteed roof, but the City still refused to accept the roof.

368. The City remained unsatisfied with the roof despite the McLaughlin testing and subsequent removal/replacement, and the issuance of warranties by Siplast. TD2 Tr. at 36, *l.* 23–25.

369. Neither party called a Siplast inspector or representative as a witness at the trial.

370. In June 2017, the City engaged Jersey Infrared Consultants with no discussion with or explanation to Nolt. TD2 Tr. at 30, *l.* 4–18.
371. On June 8, Jersey Infrared performed an infrared survey of the roof on behalf of the City. Ex. P-148 at 4. It is typical to have a roof scanned after significant repair work has been performed to ensure that the work has been remediated appropriately. TD6 Tr. at 93, *l.* 8–14. Jersey Infrared is recognized as an expert in the area of infrared thermography. TD4 Tr. at 37, *l.* 1–3.
372. In their June 2017 testing, Jersey Infrared scanned the roof, took core samples, and used a moisture meter probe. TD4 Tr. at 38, *l.* 7–14.
373. Jersey Infrared also performed lab testing of core samples taken from the roof in June 2017, following the procedures set forth in ASTM D 1864-89, which is the Standard Test Method for Moisture in Mineral Aggregate Used on Built-Up Roofs. The results of these tests are in Exhibit D-571.
374. The Jersey Infrared survey detected ten areas of potential moisture damage. Ex. P-148 at 4.
375. Jersey Infrared’s website states that suspected moisture within a roof system must be confirmed as an “actual problem” by use of invasive probes. Ex. P-235 at 2; TD4 Tr. at 90, *l.* 8–18.
376. After Jersey Infrared scanned the Project roof, it marked the location for Nolt to cut core samples. After the core samples were taken, Jersey Infrared performed moisture probes. TD4 Tr. at 38, *l.* 7–12, pg. 132, *l.* 22 to pg. 133, *l.* 4; Ex. P-238 at 44; TD8 Tr. at 33, *l.* 9–20.

377. Nolt cut cylindrical cores in a circular shape of about two to three inches in diameter. TD4 Tr. at 86, *l.* 19 to pg. 87, *l.* 4; Ex. P-238 at 41–45; TD4 Tr. at 131, *l.* 3–10, 19–24; Ex. P-238 at 42–46.
378. In order to perform the moisture probe, Jersey Infrared used a single probe galvanometric type moisture meter called a Rapitest. TD4 Tr. at 38, *l.* 19–22.
379. The Rapitest, while permitted under ASTM C1153-10 for testing moisture in roof insulation, is primarily intended for use in testing the moisture content of soil. TD4 Tr. at 38, *l.* 23 to pg. 39, *l.* 11.
380. Unlike the Delmhorst meter, the Rapitest reports on a scale of one to 10 as opposed to 1 to 100, which is the scale of the Delmhorst meter. TD4 Tr. at 40, *l.* 4–21; Ex. P-241.
381. Jersey Infrared tested the “core samples” in a laboratory and the results were consistent with the findings previously reported in the Jersey Infrared report. However, as with the McLaughlin Report, during the Project, the City never provided Nolt with testing information of core samples performed off site by Jersey Infrared. Ex. D-571; TD2 Tr. at 46, *l.* 12–17.
382. At about the same time that the City retained Jersey Infrared, Mr. Pizzo identified plumbing leaks into the building caused by loose plumbing bands in the leaders. TD8 Tr. at 19, *l.* 11 to pg. 20, *l.* 5; Ex. P-138.
383. Mr. Pizzo also identified a crack in a drain pipe that was not in John Bee’s (or Nolt’s) scope of work. John Bee’s scope of work did not include replacement or repair of all piping within the building. TD8 Tr. at 20, *l.* 24 to pg. 21, *l.* 13.

384. The pipes in the building were originally installed in 1929 and the useful life of those pipes was 50 years, some three to four decades before the Project work at issue in this case. As a result, the City issued a change order to John Bee to repair or replace piping on the fifth floor that were leaking. TD8 Tr. at 21, *l.* 14–24; TD8 Tr. at 22, *l.* 15 to pg. 23, *l.* 3; Ex. P-82.

385. While the City refused to accept Nolt’s roofing work and continued to perform extensive investigations into the already warranted roof, the City did not pursue the same measures with respect to investigating whether the active plumbing leaks (i.e., matters outside Nolt’s scope of work) had caused or were contributing to the moisture penetration into the roof system or the water infiltration into the building.

386. On June 14, 2017, Jersey Infrared issued its infrared moisture survey of the roof that it had conducted a week earlier. Ex. P-148 at 4. Jersey Infrared recommended that “an area at least one foot wider than the painted outlines should be replaced to ensure that all moisture damage is removed. Since some areas may enlarge by the time repairs are made, the roofer should remove all moisture damage found.” *Id.* at 5.

387. Attached to its report, Jersey Infrared produced a map reflecting all of the moisture probes it had taken as part of its investigation. The map also identified the location of dry probe results with an asterisk (\*) and wet probe results with a plus (+) sign. TD2 Tr. at 38, *l.* 5–9; Ex. P-148 at 29.

388. The Jersey Infrared map also included a green box which reflected the percentage of total roof that contained moisture damages areas. TD2 Tr. at 38, *l.* 9–12; Ex. P-148 at 29.

389. Overall, the Jersey Infrared testing revealed minor levels of moisture (except in two areas which showed greater levels), with the total area of moisture damage representing 1,237 square feet, or 2.9% of the entire roof. TD4 Tr. at 41, *l.* 17 to pg. 42, *l.* 10; Ex. P-148.
390. Moisture was detected in Roof Areas 1–4 in an amount of 1% or less of the total square footage of the roof. TD2 Tr. at 41, *l.* 21 to pg. 42, *l.* 14.
391. The Jersey Infrared report identified neither errors in Nolt’s work nor the source of the water. TD2 Tr. at 43, *l.* 2–8.
392. Although the Jersey Infrared Report showed moisture damage of only 2.9% of the roof, on June 14, 2017, the City’s Procurement Commissioner, Trevor Day, issued a Notice of Default to Nolt asserting (but not explaining) that 70% of the roof would require replacement. TD8 Tr. at 45, *l.* 25 to pg. 46, *l.* 11; Ex. P-147.
393. Mr. Pinto did agree that Mr. Day’s letter was inaccurate in the amount of roof material that was to be replaced. TD8 Tr. at 46, *l.* 10–16.
394. After the Jersey Infrared Report was provided to Nolt, the City directed Nolt to “remove to where it was no longer wet.” TD8 Tr. at 35, *l.* 4–10.
395. Jersey Infrared had painted with spray paint the areas on the roof for removal so Nolt knew exactly where to cut and remove. TD4 Tr. at 135, *l.* 5–8.
396. However, during the course of the removal and replacement, Mr. Pizzo directed that Nolt remove areas beyond the areas identified by Jersey Infrared, TD4 Tr. at 135, *l.* 6–9, reminding Nolt that he was the City’s representative on the roof and that he had full authority, *id.* at *l.* 19–22.

397. Mr. Pizzo admitted that while Nolt was removing roofing material, he was the sole person making the determination as to whether any further removal was required, and that no one else from the City or Keating was on the roof during the time he was making his determinations. TD9 Tr. at 16, *l.* 7–23; TD9 Tr. at 78, *l.* 9–12; TD9 Tr. at 89, *l.* 19 to pg. 90, *l.* 15.

398. Mr. Pizzo directed removal of additional material for yards well past the painted lines placed by Jersey Infrared based solely on his subjective determination. TD4 Tr. at 135, *l.* 9–18.

399. Mr. Pizzo agreed that Nolt disputed his determinations regarding whether roofing was wet or dry on several occasions. TD4 Tr. at 140, *l.* 3–6; TD9 Tr. at 91, *l.* 19 to pg. 92, *l.* 6.

400. In Area 2, for example, Mr. Pizzo believed that because DensDeck crumbled in his hand that meant that the DensDeck was wet requiring removal. However, according to others, wet DensDeck is actually mushy, not crumbly, thus calling into question Mr. Pizzo's assessment. TD4 Tr. at 138, *l.* 3 to pg. 139, *l.* 1; Ex. P-238 at 48.

401. On Roof Areas 2 or 8, Mr. Pizzo believed that he saw water between the Veral flashing ply and the roofing ply. TD4 Tr. at 141, *l.* 12–17; Ex. P-238 at 50.

402. However, it appears that, according to others, what Mr. Pizzo believed was water, was actually the roofing asphalt, which looks black and shiny after it is heated like wet tar. TD4 Tr. at 141, *l.* 19 to pg. 142, *l.* 1; Ex. P-238 at 50.

403. Adhesive between DensDeck and the insulation board stained the facer of the insulation board, but was not wet. TD4 Tr. at 142, *l.* 5–12; Ex. P-238 at 51.

404. The Jersey Infrared Report showed that Roof Area 9 only had 2% moisture content.

TD4 Tr. at 142, *l.* 2–16; P-2; Ex. P-148.

405. Where standing water was found in Roof Area 9, Nolt agreed to remove a section of roof that was shown in the Jersey Infrared Report. TD4 Tr. at 143, *l.* 17 to pg. 144, *l.* 5; Ex. P-238 at 61.

406. While Nolt was cutting roofing in Area 9 without any indication that the roof materials in this area were wet, Mr. Pizzo instructed Nolt to continue cutting Roof Area 9. TD4 Tr. at 144, *l.* 6–14; P-238 at 61. Ultimately, at Mr. Pizzo's direction, Nolt removed and replaced almost all of Roof Area 9. TD4 Tr. at 144, *l.* 18 to pg. 145, *l.* 5; Ex. P-238 at 63.

407. Mr. Pinto authenticated pictures that he says were from Roof Area 9, but he provided no testimony as to what was pictured or whether the areas shown were within the area marked by Jersey Infrared. TD9 Tr. at 23, *l.* 16–20.

408. After the McLaughlin and Jersey Infrared scans, Nolt removed and replaced over 50% of the entire roof. TD2 Tr. at 44, *l.* 24 to pg. 45, *l.* 6; TD9 Tr. at 88, *l.* 20 to pg. 89, *l.* 3.

409. Neither moisture meter nor other scientific testing was used by Mr. Pizzo or anyone else from the City when designating areas for removal beyond those identified in the Jersey Infrared report. TD2 Tr. at 45, *l.* 7–10; TD4 Tr. at 46, *l.* 15–24; TD9 Tr. at 78, *l.* 13–15.

410. It is not consistent with industry standard or the ASTM to determine moisture content by only anecdotal visual and textile observation, TD4 Tr. at 45, *l.* 17–23, in



part because there is no way to standardize observations taken through vision or touching, *id.* at 45, *l.* 24 to pg. 46, *l.* 3.

411. Mr. Pizzo's methods for identifying additional removal areas were insufficient and unreliable, and, while the Court recognizes that Mr. Pizzo took his responsibilities very seriously, the Court finds that his subjective opinions were not supported by sufficient appropriate expertise during the Project and actually proved costly to Nolt and, by extension, to the City. In addition, the Court concludes that Mr. Pizzo's explanations during trial after the fact were in significant part not credible or consistent with physical facts as presented.

412. To further explain, and undermining Mr. Pizzo's descriptions of his on-site opinions in other respects, staining on the face of the insulation is not necessarily evidence of moisture because the staining could be the result of adhesive, or simply because even new material was frequently stained. TD4 Tr. at 142, *l.* 5 to pg. 142, *l.* 1.

413. Nolt removed and replaced the additional areas directed by Mr. Pizzo even though Nolt believed those areas were dry because the City was reminding Nolt that it could assess \$10,000 per day in liquidated damages. TD2 Tr. at 46, *l.* 18–21; TD4 Tr. at 145, *l.* 6–13.

414. Mr. Pizzo could not tell from pictures the justification for requiring Nolt to rip up roof on Area 7. TD9 Tr. at 82, *l.* 8–20; pg. 83, *l.* 19–21; Ex. P-238 at 28.

415. Mr. Pizzo's testimony pertaining to identification of water or moisture in a picture was not credible as a gauge for making Nolt factually or legally responsible for the conditions for which Mr. Pizzo and, ultimately, the City, blamed Nolt.

416. The City's roofing expert, James Cohen, has spent most of his career investigating structural failures of buildings, TD8 Tr. at 76, *l.* 18–23; he is not a certified roof consultant or inspector, *id.* at 77, *l.* 4–7.
417. Mr. Cohen did not review the shop drawings for the roof prepared by Nolt and approved by the City, nor the as-built drawings. TD10 Tr. at 33, *l.* 8 to pg., 34, *l.* 6.
418. Mr. Cohen never visited the site. TD8 Tr. at 34, *l.* 17–21.
419. The City never performed or ordered an investigation into the cause of any of the excessive moisture that it alleged to exist in the roofing system. TD4 Tr. at 50, *l.* 10–17; TD4 Tr. at 71, *l.* 19–23.
420. No evidence was presented that the City or any of its consultants took ambient readings of moisture with respect to any aspect of the roof assemblies. TD10 Tr. at 49, *l.* 17–20.
421. Even though Mr. Pizzo was onsite every day and was inspecting the roof work as it was installed, Mr. Pizzo never recommended to the City that the Nolt work be stopped due to defects or errors by Nolt. TD8 Tr. at 32, *l.* 18 to pg. 33, *l.* 1.
422. Mr. Pizzo provided no testimony regarding any defects he witnessed from or in or on the fifth floor of the building. TD9 Tr. at 58, *l.* 1–18; pg. 59, *l.* 7–9.
423. The City never asked Ballinger to be involved in any investigation into the source of leaks into the building. TD8 Tr. at 48, *l.* 17–23.
424. The City never asked Klein & Hoffman to be involved in any investigation into the source of leaks into the building. TD8 Tr. at 48, *l.* 24 to pg. 49, *l.* 3.
425. In order to determine the source of water penetration, it would be possible to isolate a defined area, and fill it with water in order to see if the area allows water to enter the

area of concern, TD2 Tr. at 43, *l.* 7–21; TD10 Tr. at 51, *l.* 6–11, and, logically, to repeat that protocol for other defined areas.

426. It is also possible to spray an area down with a hose in a continuous fashion to see whether water penetrated into the assembly or the building. TD10 Tr. at 51, *l.* 12–19.

427. Mr. Cohen agreed that the “optimal” way to forensically determine the source of water would be to apply water to a potential location. TD10 Tr. at 52, *l.* 2–4, 22–24.

428. While a hose was available and on site, even when Mr. Pizzo was concerned about a leak into an opening in area of the roofing, he performed no testing in involving application of water to the area. TD9 Tr. at 59, *l.* 12 to pg. 60, *l.* 4; pg. 61, *l.* 3–10; TD2 Tr. at 43, *l.* 22–23.

429. The City did not perform any testing, either rudimentary or sophisticated, involving the application of water to determine the source of a penetration. TD10 Tr. at 52, *l.* 25 to pg. 53, *l.* 12; TD9 Tr. at 62, *l.* 15–19.

430. Mr. Pizzo performed no testing of any kind to determine the source of water penetration into the building. TD9 Tr. at 61, *l.* 23 to pg. 62, *l.* 1.

431. As contemplated, Nolt’s work interfaced directly with the roof drains installed by John Bee because the roof system was flashed to the drains. TD1 Tr. at 39, *l.* 6–9.

432. Roof drains were located across the roof, and connected to piping on the fifth floor below the roof decks. TD9 Tr. at 65, *l.* 14 to pg. 67, *l.* 8; Ex. PD-8; Ex. PD-9; Ex. PD-10; Ex. D-746.

433. Vent pipes that were in John Bee’s scope of work penetrated though the roof. TD1 Tr. at 39, *l.* 13–15.

434. If a leak in a roof drain occurred due to an issue with a band, water would “fall into the building.” TD6 Tr. at 140, *l.* 23 to pg. 141, *l.* 2. And, in fact, Mr. Pizzo witnessed leaking from bands. TD9 Tr. at 12, *l.* 20–24.
435. Specifically, because the roof was pitched towards the drain, during a storm the water would come into the drain with force, and cause a continuous leak, and then continue to drip after the rain stopped. TD9 Tr. at 64, *l.* 6–24.
436. Neither Mr. Pizzo, nor anyone else, performed testing to see if the roof drains were the cause of any leaks. TD9 Tr. at 61, *l.* 11–15; TD4 Tr. at 51, *l.* 14–18.
437. As part of its scope of work, Nolt was responsible to install “goosenecks” on top of the vapor barrier, which was installed on top of the existing roof deck. TD1 Tr. at 39, *l.* 22–25; pg. 40, *l.* 14–23.
438. The “goosenecks” are sleeves that come up from the deck of the roof, through the roof, moved over at an angle, and allow for lightening protection to be installed in the future. TD1 Tr. at 39, *l.* 25 to pg. 40, *l.* 3.
439. If water entered the gooseneck once it was installed and went down the gooseneck pipe, it would end up on the vapor barrier. TD1 Tr. at 41, *l.* 6–11.
440. Although the goosenecks could have been the source of moisture in the roof system, the City never investigated this possibility or directed any investigation into it.
441. In Roof Areas 2 and 8, the original curbs were to remain, and Nolt was not responsible to perform any work regarding the top of the curbs, even though they were severely deteriorated. TD2 Tr. at 10, *l.* 24 to pg. 11, *l.* 8; Ex. PD-6.
442. While Mr. Pizzo agreed that Nolt did “not own the pop-ups,” he performed no flood test to identify if water came through those areas. TD9 Tr. at 70, *l.* 16 to pg. 71, *l.* 3.

443. In January and February 2018, the City reported to Nolt that water had appeared on the ground under Roof Area 8, but Nolt believed that water entered through cracks in the part of the “pop-up” that was not in Nolt’s scope of work.
444. Nolt investigated and explained to the City that the water was due to condensation as a result of the building not being temperature controlled and the roof having a metal deck. TD2 Tr. at 82, *l.* 1–8; Ex. P-213.
445. The same condition occurred on Roof Area 2, which also had a metal deck. Ex. P-213 at 1.
446. Whether the water entered through the cracks in the “pop-up” or due to condensation, neither was the responsibility of Nolt. And, in fact, the City agreed with Nolt that condensation was the cause of the leak, which was not a defect or error by Nolt. TD2 Tr. at 82, *l.* 9–17.
447. The insulation specified to be used on the Project, namely, ISO board, is a “closed cell” system, which does not allow moisture to spread quickly, except along the edges where the material is cut and cells would be opened. TD4 Tr. at 53, *l.* 10–20.
448. Only after several freeze and thaw cycles would the closed cells become damaged to permit water to readily flow through the insulation. TD4 Tr. at 53, *l.* 20–25.
449. When wet, the insulation does not crumble. TD4 Tr. at 52, *l.* 19 to pg. 53, *l.* 3.
450. With the specified roofing system installed on the Project, it is not likely that water can enter the system and migrate through two layers of ply, DensDeck and approximately 8 inches of insulation to the vapor barrier and then continue to migrate farther. TD4 Tr. at 54, *l.* 9–17.

451. There are significant anti-leak redundancies in the roof system as installed, such as that seams are not created by butting sheets of materials against each other or being placed directly on top of each other, thereby making it physically more difficult for water to travel down to the vapor barrier. TD2 Tr. at 32, *l.* 6 to pg. 33, *l.* 1.
452. Mr. Cohen agreed that due to the redundancies in the system, even a gap in the surface ply would not automatically lead to the water reaching the vapor barrier. TD10 Tr. at 66, *l.* 19 to pg. 67, *l.* 1.
453. Mr. Cohen also agreed that even if there was an opening in the Veral flashing, that would not automatically result in the penetration of water into the roof assembly or the building. TD10 Tr. at 67, *l.* 10–19.
454. Mr. Cohen did not offer any testimony with respect to the flashing details as to whether there were redundancies in the system. TD10 Tr. at 41, *l.* 1–6.
455. Mr. Cohen provided no testimony that the flashing was not installed per the flashing details specified by Siplast. TD10 Tr. at 40, *l.* 16–25.
456. The roof system, as designed by Ballinger and Klein & Hoffman, and installed by Nolt, provided numerous redundancies to prevent any water from migrating; instead, intrusive water would be isolated. TD4 Tr. at 54, *l.* 18–23.
457. Even if moisture is not thwarted by the redundant system, there is also evaporation, which would dry out some areas of errant moisture such that the roof system would perform as designed. TD4 Tr. at 97, *l.* 9–14.
458. The source of the water to the extent it appeared in the Project’s roof as installed is unknown. TD4 Tr. at 51, *l.* 19–23.

459. Based on the evidence presented, the only way for significant quantities of water to get to the vapor barrier is if the roof was open during a rain event or storm. TD4 Tr. at 54, *l.* 24 to pg. 5, *l.* 4.
460. No evidence of such instances were presented at trial.
461. The adhesive used to adhere the ISO to the vapor barrier does not dam water because it is applied in a thin layer of foam, is not completely continuous, and is then flattened down. TD4 Tr. at 55, *l.* 20 to pg. 56, *l.* 12.
462. Mr. Cohen agreed that the manner in which Nolt applied the adhesive did not violate any industry standard. TD10 Tr. at 38, *l.* 7–15.
463. There was no evidence that the City or any of its consultants tested the R-value of the insulation to determine whether it had been reduced in any capacity. TD10 Tr. at 62, *l.* 19–24.
464. The City failed to meets its burden to show how areas outside of those identified by McLaughlin and Jersey Infrared were either moisture damaged or otherwise in need of replacement.

#### **VII. The City continued to refuse the roof work**

465. In August 2017, the City demanded that Siplast return to the site to re-inspect the roof and confirm that the warranties remained valid, TD2 Tr. at 47, *l.* 7–11, and on August 28, 2017, Siplast visited the Property and affirmed that the warranties issued three months earlier in May remained valid, TD2 Tr. at 47, *l.* 14–19; Ex. D-621; TD6 Tr. at 23, *l.* 5–15.
466. The City still refused to accept the roof, even after Nolt replaced over 50% of it and the manufacturer had issued a warranty and reaffirmed the warranty.

467. The City has failed to provide any explanation as to why it refused to accept the roof on August 28, 2017. TD2 Tr. at 47, *l.* 23–24.
468. Even thereafter, the City scheduled a third infrared scan to be taken by Jersey Infrared. TD2 Tr. at 47, *l.* 25 to pg. 48, *l.* 3.
469. The third infrared scan occurred on August 31, 2017, after Siplast had reaffirmed the warranty, and the City pointed to no reason to believe that the roof required further replacement. TD6 Tr. at 146, *l.* 13–20; Ex. P-164 at 2; Ex. D-621.
470. Jersey Infrared performed the third scan in late August 2017 and issued a report on September 7, 2017 (“Jersey Infrared September Report”). TD2 Tr. at 48, *l.* 6–15; Ex. P-164.
471. Jersey Infrared did not take probes or cores before issuing the Jersey Infrared September Report. Rather, the report only identified thermal anomalies. TD2 Tr. at 49, *l.* 8–18; TD4 Tr. at 57, *l.* 4–13; Ex. P-164 at 4.
472. The City then decided to perform moisture probes and cores. Ex. P-166 at 2.
473. Nolt informed the City that it desired to have its own roof consultant onsite during the probing and coring, TD2 Tr. at 52, *l.* 1–10, and Nolt hired Wiss Janney Elstner (“WJE”) and Professional Roof Services to consult during the City’s testing, TD2 Tr. at 53, *l.* 13–20.
474. On September 22, 2017, Mr. O’Brien and other Nolt employees, Nolt’s two roof consultants, Mr. Pizzo, and a representative from Jersey Infrared were all present on the roof to commence the core and probe tests. TD4 Tr. at 59, *l.* 1–5.
475. Mr. Pizzo directed where on the roof to begin the testing. TD2 Tr. at 58, *l.* 9–13; TD4 Tr. at 58, *l.* 19–22.



476. Instead, Mr. Dolan from WJE suggested that the core be taken at the hottest location reflected on the infrared scan because it was likely the “worst case scenario.” TD2 Tr. at 58, *l.* 13–20.
477. Nolt took a core at the hottest location using a Delmhorst meter to evaluate the materials on the roof and the roof deck. The Delmhorst meter confirmed that the location was dry. TD2 Tr. at 60, *l.* 16–24; TD4 Tr. at 58, *l.* 19–23.
478. Andrew Vice from Jersey Infrared then used a Rapitest moisture probe to test the material, and Mike McGonigle from Professional Roof Services tested the material with the Delmhorst meter, and both probes showed the core as being dry. TD4 Tr. at 59, *l.* 16 to pg. 60, *l.* 6; Ex. P-168.
479. After making a phone call, Mr. Pizzo then instructed Nolt to make 1’x1’ test cuts instead of the much smaller 2-inch core samples. TD2 Tr. at 61, *l.* 6–10; Ex. P-168.
480. Mr. Pizzo claimed that a larger 1’x1’ sample was necessary because the adhesive used could serve as a dam and create pockets of moisture that would evade a 2” core. TD4 Tr. at 61, *l.* 6–11.
481. Nolt continued with the coring but Mr. Pizzo refused to witness the testing and instruct Jersey Infrared not to participate as well. Mr. Pizzo and Jersey Infrared then left the roof. TD2 Tr. at 61, *l.* 15–21; TD4 Tr. at 62, *l.* 7–11; P176 at 4; Ex. P-168.
482. Nolt told the City of Mr. Pizzo’s demand and his refusal to witness the testing. Ex. P-168, TD6 Tr. at 19, *l.* 9–17.
483. Nolt took 15 cores in the areas identified as “anomalies” in the Jersey Infrared September Report. TD2 Tr. at 61, *l.* 23–25. In each location, Nolt took the core in the

- “hottest point” of the anomaly, because such points had the highest potential for moisture. TD4 Tr. at 62, *l.* 17 to 63, *l.* 13.
484. Once the cores were cut, a moisture probe was used on each core. TD4 Tr. at 63, *l.* 14–18.
485. All of these cores were measured dry with the exception of two locations. TD2 Tr. at 62, *l.* 1–3.
486. One area with some discernible moisture turned out to be a “water blister” of about 12 to 15 inches in Roof Area 2 that had moisture between the cap sheet and the base ply. TD2 Tr. at 62, *l.* 3–7; TD4 Tr. at 63, *l.* 20 to pg. 64, *l.* 9.
487. The water from the “blister” was drained, and that water did not damage any of the roofing system. TD4 Tr. at 64, *l.* 12–23.
488. The second moist location was located in a 3’x 2’ area located near a metal vent pipe on Roof Area 8, which had a metal deck. Nolt eventually determined the area was wet due to condensation caused by temperature changes that occurred from the Building not being temperature controlled. TD2 Tr. at 62, *l.* 8–15; pg. 64, *l.* 5 to pg. 65, *l.* 2; Ex. P-176.
489. The 13 other core samples taken at the remainder of the locations identified by Jersey Infrared were dry. TD4 Tr. at 66, *l.* 5–6.
490. Nolt patched the cores and later returned to repair the two areas identified as having moisture. TD4 Tr. at 65, *l.* 20–23.
491. The City still continued to refuse to accept the results of Nolt’s investigation. Rather, the City demanded that Nolt perform additional 1’x1’ test cuts at each of the 15 locations identified by Jersey Infrared. TD2 Tr. at 66, *l.* 1–15.

492. Prior to the testing on February 14, 2018, the City retained a third roofing consultant company, ARMM Associates (“ARMM”), who attended the testing and confirmed the test result findings that the case samples were all dry. TD5 Tr. at 81, *l.* 25 to pg. 82, *l.* 2.

493. At this point, the City did accept the roof as complete, TD2 Tr. at 67, *l.* 14–15, and in February 2018, the City issued Nolt a certificate of substantial completion with a date of August 28, 2017, TD2 Tr. at 82, *l.* 18–24.

#### **VIII. The City haphazardly administered its punchlists**

494. Earlier, Nolt had timely responded to the punchlist issued by the City, but the City determined to reinspect areas already completed by Nolt and added additional items in a series of punch lists. TD2 Tr. at 76, *l.* 5–13. This required Nolt to frequently remobilize equipment and staff throughout the Project. TD2 Tr. at 76, *l.* 13–17.

495. The City added punchlist items seriatim for subcontractors that had already demobilized from the Project, requiring the subcontractors to remobilize with scaffolding and mast towers. TD2 Tr. at 77, *l.* 3–13.

496. The punchlists on this Project were prepared by different parties, including the City, Keating, Mr. Pizzo, and Ballinger. TD2 Tr. at 77, *l.* 17–24.

497. The City’s roof design sub-consultant to Ballinger, Klein & Hoffman, never published a report of defective or non-compliant roof work. TD2 Tr. at 78, *l.* 10–14.

498. By June 2017, Nolt had “minor punchlist” work remaining. TD6 Tr. at 142, *l.* 1–4.

499. On June 30, 2017, Nolt wrote to the City again, noting that “[t]he areas of the roof that showed signs of moisture have been removed in their entirety, and our concern that was referenced in our conference call on Monday regarding the areas noted in the scan

being larger than anticipated was validated.” Ex. D-602 at 2–3. Nolt added that Siplast’s “plan is to do a post installation inspection once the repairs made as a result of the recent roof scan are completed, and then issue a report to confirm their acceptance of the repairs and re-confirm the validity of the warranty.” *Id.* at 3.

500. On August 1, 2017, Mr. O’Brien had instructed Nolt “don’t do anything [Pizzo] asks related to the roof.” Ex. D-611.

501. On August 28, 2017, Siplast conducted another inspection of the roof, found “some loose laps in the Veral flashing and some air pockets in the Parapro 123 Flashing,” and determined that Nolt would need to “correct[]” certain areas but that “[t]he terms of the guarantee will remain in effect.” Ex. D-621 at 1.

502. Nolt requested a punchlist inspection on August 25, 2017 and again on September 15, 2017, but the City did not provide Nolt with a response as to when the City’s representatives would inspect the punchlist work. TD6 Tr. at 21, *l.* 14–16; Ex. P-174.

503. In the context of working through punchlist matters, on September 15, 2017, Nolt wrote to a roof consultant, Michael McGonigle of Professional Roof Services, regarding the infrared roof scans and attached the September Jersey Infrared report. Ex. D-624 at 1. Nolt wrote that “The first scan they did there were a few areas that showed up wet, so we took care of them. They then did another roof scan and there were additional areas that never came up during the first roof scan that showed up wet, so we again took care of them. They did a 3rd roof scan (see attached) and there are more areas that are showing up as possibly being wet.” *Id.* Nolt asked McGonigle “to go to the site to review this roof (Siplast) with us and do some moisture probes of the areas.” *Id.*

504. On September 22, 2017, personnel from Nolt, McGonigle, Scott Dolan of WJE, Mr. Pizzo, and Andrew Vice of Jersey Infrared went to the roof to test the areas with thermal anomalies indicated in the September Jersey Infrared report for moisture. According to Nolt, Nolt began to take two-inch diameter circular cores in the areas, but Mr. Pizzo requested Nolt perform one-square-foot cuts. Ex. P-168 at 1.
505. Following September 2017, there was no further water infiltration into the roofing system. The test cuts taken by Nolt in February 2018 were all dry. TD1 Tr. 67, *l.* 11–13.
506. Believing that they had completed the punchlist and not hearing from the City as to a date for reinspecting, in late September 2017, Nolt had demobilized from the Project. TD2 Tr. at 80, *l.* 6–12; Ex. P-165; TD6 Tr. at 20, *l.* 5–21; Ex. P-174.
507. By October 2, 2017, Nolt still had not received the results of any inspection of the punchlist. TD6 Tr. at 21, *l.* 16–18.
508. Five weeks later, on November 13, 2017, the City provided an additional punchlist to Nolt with new items added. TD2 Tr. at 80, *l.* 13–20; Ex. P-196.
509. The November 2017 punchlist list included items from an architect’s inspection more than a month earlier on October 3, 2017, but the City and Keating did not provide Nolt a copy of report from the architect until almost 45 days later. TD2 Tr. at 81, *l.* 1–12; Ex. P-196.
510. The City had failed to provide the results of a punchlist inspection from August 25, 2017 until November 13, 2017, reflecting (as does the City’s conduct of “punchlist” activities overall as an example of the City’s handling of Phase II of the Project vis-à-vis Nolt) a lack of good faith on the part of the City.

511. A punchlist is usually only one document. On this Project, the City and its consultants issued between 20 and 25 separate “punchlists.” TD3 Tr. at 37, *l.* 6–14.
512. The City’s method of review of the punchlists delayed Nolt’s completion of the work included on the punchlists. TD2 Tr. at 87, *l.* 3–4.
513. As a result of the inefficient punchlist administration, Nolt was on the Project materially longer than anticipated after Nolt achieved substantial completion in December 2016. TD2 Tr. at 79, *l.* 13–21.
514. StCR § 26(c) states that the contractor “shall be entitled to a reasonable extension of time for unavoidable delays or interference in completion of the Contract caused by: any acts or omissions of the City. . .”
515. Any delay in completing the punchlist work before November 20, 2017 was the responsibility of the City; thus, Nolt is entitled to an excusable delay until this date for final completion. TD3 Tr. at 41, *l.* 6–13; Ex. PD-7, Chart 2.
516. In total, Nolt presented evidence and explanation to support its claim that it was entitled to an excusable, compensable extension of time. TD5 Tr. at 28, *l.* 4–17.

**IX. Nolt seeks \$2,520,683.11 in damages from the City**

517. Nolt finished all the work on the Project. TD1 Tr. at 150, *l.* 23–25.
518. Nolt submitted a multi-component claim under the Contract to recover contract balance that had been withheld and additional costs and to seek a time extension. TD6 Tr. at 23, *l.* 16 to pg. 24, *l.* 7; Ex. D-668.
519. Nolt submitted Payment Application No. 16, which sought the net amount (after retainage was withheld) of \$409,940.67. Ex. P-105; Ex. PD-5; TD1 Tr. at 152, *l.* 1–7.

520. Nolt submitted Payment Application No. 17, which sought the net amount (after retainage was withheld) of \$32,030.05. Ex. P-123; Ex. PD-5; TD1 Tr. at 152, *l.* 8–10.
521. Nolt submitted Payment Application No. 18, which sought the net amount (after retainage was withheld) of \$42,957.50. Ex. P-217; Ex. PD-5; TD1 Tr. at 152, *l.* 11–13.
522. Nolt submitted Payment Application No. 19 for all retainage previously withheld in the amount of \$602,848.31. Ex. P-216; Ex. PD-5; TD1 Tr. at 152, *l.* 14–16.
523. In total, Nolt claimed that the City failed to pay Nolt \$1,087,776.53 in contract balance. Ex. PD-5; TD1 Tr. at 152, *l.* 17–22. Under the contract and by law, to this contract balance 10% per year is added, as is another 1% per month. 62 Pa. C.S.A. §§ 3932(c), 3941(b), 3935(a); StCR § 55.
524. Nolt claims that it performed extra work for which the City did not pay.
525. When extra work arose on the Project, Nolt submitted a change order request with detailed breakdowns of labor, material, and equipment that would be used to complete the extra work.
526. On all change order requests submitted by Nolt, Mr. Pinto simply and routinely reduced the amount of compensation sought by striking various components of Nolt's cost proposal. TD1 Tr. at 89, *l.* 12 to 90, *l.* 13.
527. The City would then issue a change order in a reduced amount. TD1 Tr. at 167, *l.* 25 to pg. 168, *l.* 3.
528. Nolt informed the City that it would not accept what Nolt viewed as unilateral change orders and that Nolt would perform the work and track its costs for submission to the City. TD1 Tr. at 90, *l.* 14–19.

529. StCR § 52 provides that payment on force account “will be for the reasonable, actual and necessary direct costs of the work” as described for each category of cost, plus stipulated percentage for overhead and profit as set forth. Ex. D-1 at 75–6.
530. The City issued Construction Change Directive No. 1 (“CCD-1”) to Nolt to perform asbestos abatement work and issued a change order for this work. Ex. P-268; TD1 Tr. at 153, *l.* 15–25.
531. The City refused to compensate Nolt for the cost of having an in-field superintendent and safety supervisor, and for certain equipment. TD1 Tr. at 154, *l.* 2–7.
532. The City refused to compensate for the superintendent and site safety because it contended that Nolt was required by the Contract Documents to provide these personnel for all work performed onsite, though Nolt claims that the site safety personnel and superintendent onsite during the asbestos abatement were only supervising the abatement work. Ex. P-268; TD1 Tr. at 154, *l.* 17–25; pg. 156, *l.* 1–8.
533. After the roof was demolished, additional crickets were identified that were not shown on the drawings and could not have been seen from any pre-bid inspection as they were covered by the existing roof. TD1 Tr. at 156, *l.* 18 to pg. 158, *l.* 11. Nolt had proposed removing the subject cricket early on to prepare for the concrete deck cutting, but the City’s Mr. Pinto inserted himself into this minor sequencing issue and told Nolt to wait until later in the Project on the assumption that it might not have to be done separately at all. In fact, the cricket removal preceded the City-directed sequence instructions. Ex. D-671 at 43. This is representative of the strained relationship between the City and the contractor with expertise.



534. There was a \$10 per square foot unit price allowance in the Contract Documents for cricket removal. TD1 Tr. at 159, *l.* 6–8.
535. The City refused to pay Nolt the unit price allowance for a cricket that was not identified in the drawings because, according to the City, it was in area of the roof that would have been cut out by Nolt later in the Project. TD1 Tr. at 158, *l.* 9–15.
536. The City acknowledged that the cricket was unforeseen and that it was removed by Nolt. TD1 Tr. at 158, *l.* 23–24.
537. Nolt removed the cricket so that it could install its vapor barrier and to ensure that the concrete was the same thickness when it cut the deck. TD1 Tr. at 158, *l.* 16–22.
538. Nolt submitted a charge to the City at the agreed-upon unit price for the removal of the extra cricket but the City refused to pay it. TD1 Tr. at 159, *l.* 13–17.
539. In Roof Areas 3 and 9, Nolt performed additional work to install roof drains that were required to alleviate ponding on the roof. TD1 Tr. at 159, *l.* 20 to pg. 160, *l.* 5.
540. The roof, as designed (not by Nolt), did not relieve the ponding. TD1 Tr. at 160, *l.* 6–19; TD4 Tr. at 147, *l.* 1–6.
541. On behalf of Nolt, Mr. Knauff submitted RFI No. 64. TD4 Tr. at 146, *l.* 11–19; Ex. P-103.
542. According to Nolt, it was impossible to install enough tapered insulation to drain the water as depicted on the plans because the concrete deck was not flat. TD1 Tr. at 160, *l.* 20–25.
543. The deck sloped severely enough that in order to drain the water, the tapered insulation would have had to be installed at a height that exceeded the curb. TD4 Tr. at 147, *l.* 11 to pg. 48, *l.* 2; Ex. P-103.

544. Mr. Pinto did not dispute testimony from Nolt's witnesses that, due to the concrete roof deck slope, in order to install enough tapered insulation to achieve sufficient slope to drain the water, the tapered insulation would be higher than the wall. TD6 Tr. at 155, *l.* 11 to pg. 156, *l.* 6.
545. The specifications mandated that the roof come within a certain number of inches below the top of a curb, which prevented Nolt from installing the insulation above the curb. TD4 Tr. at 148, *l.* 2–4.
546. Nolt's RFI No. 64 informed the City and its consultants of the impossibility to install tapered insulation in order to drain the water. Ex. P-103.
547. Nolt had no design responsibility for the tapered roof installation, TD1 Tr. at 162, *l.* 12–15, and the roof drains were not shown on the plans in Areas 3 and 9, *id.* at 160, *l.* 7–9.
548. Because the design would not drain the water, the only other way to drain the water would be through installation of additional roof drains, an approach also recommended by Siplast. TD4 Tr. at 147, *l.* 7–10.
549. Nolt tried twice to install the insulation as designed, but the ponding water did not drain properly. TD4 Tr. 147, *l.* 1–6.
550. After discussion between the parties, the City directed installation of the additional roof drains but refused to pay for them, without acknowledging the design flaws. TD1 Tr. at 161, *l.* 1–6.
551. These costs of \$50,077.82 were included in Nolt's claim to the City. Ex. D-668; TD6 Tr. at 24, *l.* 22 to pg. 25, *l.* 1.

552. Nolt submitted a change order request for additional work included in Bulletins 24 and 26R resulting from design errors and omissions. Mr. Pinto reduced the amount of compensation sought by Nolt and issued a change order, directing Nolt to proceed with the extra work. TD1 Tr. at 162, *l.* 16 to pg. 164, *l.* 11; Ex. P-271. These costs of \$5,476.20 were included in Nolt's claim to the City. Ex. D-668; TD6 Tr. at 24, *l.* 22 to pg. 25, *l.* 1.
553. Nolt submitted a change order request for additional work included in Bulletin 33 resulting from design errors and omissions. Mr. Pinto again reduced the amount of compensation sought by Nolt and issued a change order directing Nolt to proceed with the extra work. TD1 Tr. at 164, *l.* 18 to pg. 165, *l.* 13; pg. 165, *l.* 20–23; Ex. P-272.
554. Nolt tracked its costs to perform the work, and claims it is entitled to the \$2,776.28 difference between its actual costs and the change order amount. Ex. PD-5; TD1 Tr. at 165, *l.* 23–24.
555. These costs of \$2,776.28 were included in Nolt's claim to the City. Ex. D-668; TD6 Tr. at 24, *l.* 22 to pg. 25, *l.* 1.
556. Nolt submitted a change order request for additional work included in Bulletin 32 resulting from design errors and omissions. Again, Mr. Pinto reduced the amount of compensation sought by Nolt and issued a change order directing Nolt to perform the extra work. TD1 Tr. at pg. 166, *l.* 21–23; Ex. P-273; TD1 Tr. at 166, *l.* 1–20.
557. Nolt tracked its costs to perform the additional work, and claims it is entitled to the \$8,629.59 difference between its actual costs and the change order amount. Ex. PD-5; TD1 Tr. at 166, *l.* 24 to pg. 167, *l.* 3.

558. These costs were included in Nolt's claim to the City. Ex. D-668; TD6 Tr. at 24, *l.* 22 to pg. 25, *l.* 1.
559. Nolt submitted a change order request for additional work included in Bulletin 23 resulting from an unforeseen condition. Mr. Pinto reduced the amount of compensation sought by Nolt and issued a change order directing Nolt to perform this extra work. TD1 Tr. at pg. 167, *l.* 4–15; Ex. P-274.
560. Nolt tracked its costs to perform the work, and claims it is entitled to the difference of \$2,203 between its actual costs and the change order amount. Ex. PD-5; TD1 Tr. at 167, *l.* 15–16.
561. Nolt's submitted these extra work items as part of its claim to the City, with backup documentation to support the costs requested. Ex. D-668; TD1 Tr. at 167, *l.* 17–20.
562. These costs of \$2,203 were included in Nolt's claim to the City. D-668; TD6 Tr. at 24, *l.* 22 to pg. 25, *l.* 1.
563. In October 2016, Nolt again informed Keating and the City that it believed it was entitled to a time extension due to numerous bulletins and changes implemented by the City. Ex. D-362; Ex. D-370; TD1 Tr. at 127, *l.* 1–12.
564. No time extension was issued. Instead, Keating proposed that Nolt accelerate its work to avoid the assessment of liquidated damages. Ex. D-370; TD1 Tr. at 128, *l.* 11–22; TD6 Tr. at 132, *l.* 17–24.
565. During the fall of 2016, the City continued to attribute to Nolt all Project delays. Ex. D-406; TD1 Tr. at 130, *l.* 7–13; pg. 131, *l.* 6–9; P-89; TD7 Tr. at 148, *l.* 19–22.
566. Nolt repeatedly advised the City and Keating of its need for a time extension.

567. When no time extension was granted, Nolt accelerated its work. TD1 Tr. at 128, *l.* 19–23; pg. 130, *l.* 21 to pg. 131, *l.* 5; Ex. P-101 at 18.
568. Nolt paid its forces and subcontractors to work overtime. Ex. P-278; TD1 Tr. at 168, *l.* 17–23; Ex. PD-5.
569. Nolt incurred overtime costs for roofing mechanics, roofing apprentices, and laborers. TD1 Tr. at 169, *l.* 5–10.
570. Nolt incurred overtime with respect to subcontractors’ iron workers and crane operators. TD1 Tr. at 169, *l.* 13–15.
571. These acceleration costs, computed by Nolt to be \$63,000.22, were included in Nolt’s claim to the City, but Nolt does not explain the contractual justification for including the 20% mark-up in the calculation. Ex. D-668; TD6 Tr. at 24, *l.* 22 to pg. 25, *l.* 1. Without the mark-up, the net acceleration cost is \$44,887.54.
572. Nolt incurred additional costs due to being onsite longer as a result of Bulletin 7 delays, including costs for supervision, equipment, office trailers, portable toilets, project manager, safety and scheduling. TD2 Tr. at 71, *l.* 5–14; Ex. P-277.
573. Nolt included the overhead percentages allowed by the StCR when calculating its extended general conditions damages. TD2 Tr. at 72, *l.* 13–18.
574. In total, Nolt’s extended general conditions costs from December 2016 through February 14, 2018 total \$488,422.96. Ex. PD-5; TD2 Tr. at 72, *l.* 2–12; Ex. P-277.
575. These costs were included in Nolt’s claim to the City. Ex. D-668; TD6 Tr. at 24, *l.* 22 to pg. 25, *l.* 1.

576. Because the City caused a 339-day excusable, compensable delay to the Project, Nolt claims that the City is responsible for compensating Nolt for its extended general conditions costs.

577. Nolt spent \$21,141.98 to cut cores and test the roof in September 2017 and February 2018. TD2 Tr. at 68, *l.* 16–21; Ex. PD-5; Ex. P-275.

578. The City accepted Nolt’s charges for the “final test cuts” in February, less charges for WJE. TD6 Tr. at 151, *l.* 22 to pg. 152, *l.* 1.

579. Nolt is entitled to recover the costs paid to WJE in connection with the core sampling.

580. Despite its agreement, the City has not paid Nolt for these costs incurred in February 2018.

581. Nolt seeks damages for removing and replacing roof that exceeded the areas identified in the McLaughlin and Jersey Infrared reports. TD2 Tr. at 67, *l.* 16 to pg. 68, *l.* 3.

582. Nolt calculated all roofing labor, crane costs associated with roofing, roofing materials, and dumpsters after April 1, 2017, which totaled \$829,628.06. TD2 Tr. at 69, *l.* 6–11; Ex. P-275.

583. After April 1, 2017, Nolt’s cost per square foot of roof removal was \$25.27. TD2 Tr. at 69, *l.* 12–22.

584. Nolt removed \$43,664.58 from its roofing claim to represent the square footage of roof identified in the McLaughlin and Jersey Infrared reports. TD2 Tr. at 9, *l.* 17–22; PD-5.

585. Nolt claims that it incurred costs of \$785,981.48, payable by the City, to remove and replace areas of roof that were outside of the McLaughlin and Jersey Infrared reports and that were never determined to be wet.<sup>3</sup> Ex. PD-5.

586. The City does not dispute the labor rates and hours included in Nolt's roofing claim. TD2 Tr. at 70, *l.* 10–17.

587. These costs were included in Nolt's claim to the City. Ex. D-668; TD6 Tr. at 24, *l.* 22 to pg. 25, *l.* 1.

588. The City does not dispute that Nolt is entitled to \$2,203.03 for the extra work presented in P-274, and \$6,971.32 for Testing and Coring charges. Supp. Stip., July 14, 2021 at ¶ 19.

#### **X. The City counterclaims for \$1,180,420.12**

589. The City's counterclaim is premised solely on the basic contention that if Nolt had completed all of its work by December 16, 2016, the City would not have incurred any additional Project-related costs. TD9 Tr. at 102, *l.* 8–23.

590. The City seeks to recover from Nolt \$342,125 for costs paid to Keating for services rendered from December 17, 2016 through May 31, 2017. Supp. Stip., July, 14, 2021 at 5.

591. The City seeks to recover from Nolt \$866 for costs paid to PECO for services provided from December 17, 2016 through May 31, 2017. Supp. Stip., July, 14, 2021 at 6; Ex. D-685 at 4.

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<sup>3</sup> In claiming \$785,981.48 for replacing the roof, Nolt made a small miscalculation. The total cost to replace the roof was \$829,628.06. In total, 32,835 square feet were removed. That equates to a cost per square foot of \$25.27. Nolt admits that Nolt properly removed 1,720.24 square footage of the roof at its own cost. Thus, the total cost attributable to Nolt is \$43,464.58, not, as Nolt calculated, \$43,646.58. So Nolt's claim, correctly calculated, is for \$786,163.48.

592. The City seeks to recover from Nolt \$29,326 for costs paid to Direct Energy Business for services rendered from December 17, 2016 through May 31, 2017. Supp. Stip., July 14, 2021 at 6.
593. The City seeks to recover from Nolt \$14,080 for costs paid to Talson Solution for services rendered from December 17, 2016 through May 31, 2017. Supp. Stip., July 14, 2021 at 6.
594. The City seeks to recover from Nolt \$2,400 for costs paid to Philadelphia Area Labor-Management Committee (PALM) for services rendered from December 17, 2016 through May 31, 2017. Supp. Stip, July 14, 2021 at 7.
595. The City seeks to recover from Nolt \$113,672.50 for costs paid to the Graham Company for Site safety services rendered from December 17, 2016 through May 31, 2017. Ex. D-747 at 3.
596. The City seeks to recover from Nolt \$2,660.60 for costs paid to the Graham Company for trailer rental provided from December 17, 2016 through May 26, 2017. Ex. D-747 at 4.
597. The City seeks to recover \$48,903.75 for costs paid to Ballinger for services rendered by Ballinger employees after December 31, 2016. Ex. D-686 at 8.
598. Seventy percent (70%) of the hours worked by Ballinger included in the City's backcharge were performed before June 1, 2017. Ex. D-686 at 9.
599. Thus, the City seeks to recover \$35,325.76 for costs paid to Ballinger for services provided from December 17, 2016 through May 31, 2017. Ex. D-686 at 8–9.
600. In total, the City seeks to recover \$540,455.86 in its counterclaim for matters arising between December 16, 2016 and May 30, 2017.



601. Even though Nolt demobilized in September 2017, the City continued to backcharge Nolt thereafter for all project-related costs after that date, including field-related costs. TD9 Tr. at 115, *l.* 6–19.
602. The City maintained field representation onsite through the fall of 2017. TD6 Tr. at 148, *l.* 1–4.
603. Nolt and its subcontractors were on site six (6) days in total between September 30, 2017 and December 31, 2017 based on Nolt’s certified payrolls. Ex. P-279 at 1, 5, 21.
604. The City contended that Nolt would come to the site “randomly” to perform punchlists, which is why the City contends it needed full-time onsite presence and to maintain the Owner Controlled Insurance Program (“OCIP.”) TD9 Tr. at 115, *l.* 22 to pg. 116, *l.* 8.
605. The City paid Keating \$61,730 to have Mr. Pizzo onsite full time from October 1, 2017 through the end of December 2017. Ex. D-683 at 1–42.
606. The City never asked Keating to reduce Mr. Pizzo’s hours prior to his departure from the site at the end of December 2017. TD9 Tr. at 139, *l.* 22 to pg. 140, *l.* 1.
607. The City seeks to charge Nolt for the time Mr. Pizzo spent collecting photographs, organizing files, and walking the site for safety, even though Nolt had demobilized. TD9 Tr. at 127, *l.* 21 to pg. 128, *l.* 12.
608. The City explains that it kept Mr. Pizzo onsite because of his alleged “intellectual knowledge” of the Project. TD6 Tr. at 148, *l.* 1–4.
609. Mr. Pizzo had no specialized or advanced knowledge.
610. Mr. Pinto explained that normally with respect to punchlists, the City would remove its onsite presence, by requiring that a contractor provide 48-hours’ notice of punchlist

work so that the City could staff the site when the contractor would be working. TD8 Tr. at 43, *l.* 2–16; pg. 44, *l.* 10–15; TD9 Tr. at 127, *l.* 5–20.

611. The City never asked Nolt to provide notice of punchlist work; instead, the City elected to keep the site staffed on a full-time basis even if Nolt was onsite only very sporadically and without significant numbers of personnel.

612. Mr. Pizzo was onsite full time for quality assurance and quality control even though Nolt was demobilized, and not performing work requiring such services.

613. Mr. Pizzo left the site at the end of December 2017, before the 1'x1' testing was performed; thus, his services were not needed for any activities pertaining to testing. TD9 Tr. at 133, *l.* 7–9.

614. The City failed to take reasonable steps to reduce its onsite field presence consistent with how it normally winds down such services, and this is representative of the City's not pursuing efforts to mitigate what it claimed was the impact of Nolt's work and delay on the Project.

615. The Project Safety Manual was prepared by The Graham Company, and included in the Contract by Appendix 3. TD10 Tr. at 15, *l.* 6–20; Ex. D-1; Ex. P-280.

616. Oversight of the safety program was assigned by the City to Graham. TD10 Tr. at 23, *l.* 1–3.

617. The Site Safety Services provided by Graham were charged and paid by the City even on days when Nolt was not onsite performing its work.

618. For example, the City sought to backcharge Nolt for 18 hours for the safety representative provided by Graham during the week of October 21, 2017 even though

Nolt's certified payrolls show that no Nolt workers were onsite that week. TD9 Tr. at 118, *l.* 15 to pg. 119, *l.* 18; Ex. P-279.

619. Although the Project Safety Manual anticipated that a program safety manager and safety monitor would be onsite during performance of the work, the Manual provided that the City could direct them to leave the site. TD10 Tr. at 15, *l.* 25 to pg. 17, *l.* 11.

620. There was nothing that prevented safety monitoring by someone other than Graham, such as a competent City employee. TD10 Tr. at 24, *l.* 22 to pg. 25, *l.* 15.

621. Safety monitoring by a City employee would not have conflicted with any requirements of the OCIP insurers. TD10 Tr. at 25, *l.* 19–23.

622. During the punchlist work, the time involved in performing safety monitoring is reduced. TD10 Tr. at 27, *l.* 20 to pg. 28, *l.* 1.

623. Calvin Cass of The Graham Company testified that D-747 at Page 3 provides a summary of all safety services charges invoiced by Graham and paid by the City. TD10 Tr. at 13, *l.* 23.

624. The costs paid by the City for safety service after Nolt demobilized are \$20,577.50. TD10 Tr. at 13, *l.* 24 to pg. 14, *l.* 5; Ex. D-747.

625. Mr. Cass testified that D-747 at Page 4 provides a summary of all trailer costs charged invoices by Graham and paid by the City. TD10 Tr. at 14, *l.* 6–9.

626. The costs paid by the City for trailer costs after Nolt demobilized are \$2,660.60. TD10 Tr. at 14, *l.* 10–13.

627. If the City had agreed to an extension of time, the same costs would have been charged by Graham to the City but the City would have been responsible, and the City could not have backcharged them to Nolt. TD10 Tr. at 14, *l.* 23 to pg. 15, *l.* 5.

628. Mr. Vosbikian provided no analysis as to the cause of delay to final completion because his analysis only went up to the City-imposed substantial completion date identified of August 28, 2017. TD7 Tr. at 113, *l.* 1–10.
629. The City seeks to recover from Nolt \$124,743.44 for costs paid to Keating for services rendered after August 31, 2017. Supp. Stip., July 14, 2021 at 5.
630. The City seeks to recover from Nolt \$33,447.50 for costs paid to The Graham Company for Site safety services after August 31, 2017. Ex. D-747 at 3.
631. The City seeks to recover from Nolt \$3,724.84 for costs paid to Graham for trailer rental after August 26, 2017. Ex. D-747 at 4.
632. The City seeks to recover \$48,903.75 for costs paid to Ballinger for services rendered by Ballinger employees after August 31, 2017. Ex. D-686 at 8.
633. Only 7.4% of the hours worked by Ballinger included in the City's backcharge to Nolt were performed after August 31, 2017. Ex. D-686 at 9.
634. Thus, the City seeks to recover \$3,618.88 ( $\$48,903.75 \times .074 = \$3,618.88$ ) for costs paid to Ballinger for services provided after August 31, 2017. Ex. D-686 at 8–9.
635. Mr. Cass from The Graham Company, which in addition to preparing the safety manual had placed and administered the Owner Controlled Insurance Program for the Project, testified that the additional Workers' Compensation premiums incurred by the City for the OCIP between December 2016 and February 2018 were charged based on the number of payroll hours, and it did not matter whether the hours were incurred in 2016 or 2017. TD10 Tr. at 11, *l.* 25 to pg. 13, *l.* 6.
636. Thus, Nolt's performance of labor in 2017 did not cause the City to incur additional premium for Workers' compensation in the amount of \$3,562 after December 2016

because the City could have incurred the same premium if the labor hours were performed earlier.

637. In April 2017, during the period that it was backcharging Nolt, the City agreed to pay Keating approximately \$120/hr for Mr. Pizzo's time when the City was previously charged approximately slightly more than half that rate (\$68/hr) for Mr. Pizzo's time. The only change to explain this upcharge appeared to be Mr. Pizzo's having switched employers to a different Keating sub-consultant. TD9 Tr. at 124, *l.* 5–20.

638. Mr. Pizzo had obtained no additional training or other merit-based reason for his rate to nearly double. *See* TD9 Tr. at 125, *l.* 2–13.

639. In agreeing to pay Ballinger \$67,523, the City did not review timesheets or daily reports reflecting any work performed. TD9 Tr. at 104, *l.* 25 to pg. 107, *l.* 1.

640. The City did not request timesheets. TD9 Tr. at 107, *l.* 11–21.

641. Ballinger's proposal for additional services, which is the basis for the City's damage pertaining to Ballinger, was submitted a year and seven months after December 2016. TD9 Tr. at 108, *l.* 21 to pg. 110, *l.* 3; Ex. D-668.

642. Ballinger's billings included time for long-term protection of the pop-ups that were not in Nolt's scope of work. TD9 Tr. at 112, *l.* 14 to pg. 113, *l.* 23.

643. Ballinger's billings include time spent on roof drains in Roof Areas 3 and 9 that Nolt contends were required due to design errors, and which are part of Nolt's extra work claim. TD9 Tr. at 113, *l.* 24 to 114, *l.* 9.

644. The City seeks to backcharge Nolt for charges related to Office of Equal Opportunity tracking performed by Talson Solutions, even though there are no

contemporaneous timesheets or documents attached to the invoice. TD9 Tr. at 135, *l.* 1–21.

645. Mr. Lowe admitted that the services provided by PECO and Direct Energy would have continued past December 2016 even if Nolt had completed its work. TD9 Tr. at 133, *l.* 22 to pg. 134, *l.* 4.

646. Nolt was not charged these costs during the Project. They appeared as part of the dispute in the context of the claims between the parties.

647. No evidence was presented at trial to explain how Nolt’s use of lighting/power past December 2016 increased or added to the City’s already planned lighting/power charges, as the City planned to keep the building connected to lighting/power.

#### CONCLUSIONS OF LAW

1. The substantive law of Pennsylvania applies to this case. *Erie R.R. Co. v. Tompkins*, 304 U.S. 64, 78 (1938). There are no novel legal questions presented.
2. In order to maintain a breach of contract claim, a plaintiff must show that “there was a contract, the defendant breached it, and plaintiffs suffered damages from the breach.” *McShea v. City of Philadelphia*, 995 A.2d 334, 340 (Pa. 2010).
3. Under Pennsylvania law, “a party breaches a bilateral contract when he improperly does or fails to do something which he has expressly or impliedly undertaken to do to facilitate the performance of the other party.” *Johnson v. Fenestra, Inc.*, 305 F.2d 179, 181 (3d Cir. 1962).
4. When interpreting a contract, “the ultimate goal is to ascertain and give effect to the intent of the parties as reasonably manifested by the language of their written agreement.” *Humberston v. Chevron U.S.A., Inc.*, 75 A.3d 504, 510 (Pa. Super. Ct. 2013) (quoting

*Szymanowski v. Brace*, 987 A.2d 717, 722 (Pa. Super. Ct. 2009)); *see also Gaffer Ins. Co. v. Discover Reinsurance Co.*, 936 A.2d 1109, 1113 (Pa. Super. Ct. 2007) (noting preference for “reasonable, probable and natural conduct” to be ascribed to parties to a contract) (quoting *Midomo Co., Inc. v. Presbyterian Hous. Dev. Co.*, 739 A.2d 180, 186 (Pa. Super. Ct. 1999)).

5. “When construing agreements involving clear and unambiguous terms, this Court need only examine the writing itself to give effect to the parties’ understanding.” *Quinn v. Bupp*, 955 A.2d 1014, 1017 (Pa. Super. Ct. 2008) (quoting *Nevyas v. Morgan*, 921 A.2d 8, 15 (Pa. Super. Ct. 2007)).
6. Courts apply the same principles of interpretation to contracts involving public entities. *See e.g., James Corp. v. North Allegheny Sch. Dist.*, 938 A.2d 474, 484 (Pa. Commw. Ct. 2007) (“Where the terms of a contract are clear and unambiguous, courts are required to give effect to that language.”).
7. Yet a “general commercial contract[.]” also “imposes upon each party a duty of good faith and fair dealing in its performance and its enforcement.” *John B. Conomos, Inc. v. Sun Co., Inc.*, 831 A.2d 696, 705 (Pa. Super. Ct. 2003). In performing their contractual duties, contractors and owners must not “ev[ade] the spirit of the bargain, ... slack[.] off, willful[ly] render[.] imperfect performance, abuse [their] power to specify terms, and interfere[.] with or fail[.] to cooperate in the other party’s performance.” *Somers v. Somers*, 613 A.2d 1211, 1213 (Pa. Super. Ct. 1992). And “where a party is granted discretion under the terms of the contract, the discretion must be exercised reasonably.” *Dep’t of Transp. v. Pa. Indus. for Blind & Handicapped*, 886 A.2d 706, 716 (Pa. Commw. Ct. 2005).

#### **I. Nolt was substantially complete by December 2016**

8. To be substantially complete, a contractor must have materially performed the terms of the contract. *Pressey v. McCornack*, 84 A. 427, 428 (Pa. 1912). “[T]he remaining work to be done can be fairly significant,” so long as the work is “*sufficiently* complete” for the owner to move on to next steps. 3 Bruner & O’Connor on Construction Law § 8:23.
9. By December 2016, Nolt had finished over 90% of the work and provided the City with a serviceable roof with which it could proceed to Phase III of the Project.
10. D.A. Nolt had substantially completed the Contract by December 2016.
11. The City’s refusal to accept the roof in December 2016, and again in August 2017, was not justified under the Contract and was arbitrary and not reasonable or in good faith.

## **II. The City had actual notice of a delay**

12. The issue of whether Nolt provided notice to the City with respect to various issues, most notably an extension of time for Nolt’s performance, figures prominently in this dispute. Pennsylvania law takes a “lenient approach to construing notice provisions in construction contracts whereby the spirit of the provision, rather than the strict terms, dictates whether a contractor seeking compensation for a claim or claims complied with the contract’s notice provisions.” *First Gen. Constr. Corp. v. Kasco Constr. Co.*, No. 10-cv-2655, 2011 WL 2038542, at \*7 (E.D. Pa. May 24, 2011) (citing *James Corp.*, 938 A.2d at 486).
13. In *James Corp.*, the Pennsylvania Commonwealth Court explained that “[t]o adopt the severe and narrow application of the notice requirements would be out of tune with the language and purpose of the notice provisions, as well as with this court’s wholesome concern that notice provisions in contract-adjustment clauses not be applied too technically and illiberally where the [g]overnment is quite aware of the operative facts.” 938 A.2d at



484 (quoting *Hoel-Steffen Constr. Co. v. United States*, 456 F.2d 760, 767-68 (Ct. Cl. 1972)).

14. As a result, an owner cannot defeat a contractor's otherwise proper claim based on the contractor's failure to submit the formal notice in all particulars set out in their construction contract if the owner (1) had actual notice and (2) was not prejudiced by the lack of formal notice. *See James Corp.*, 938 A.2d at 486-87 (allowing contractor to proceed with its claim notwithstanding its failure to give timely formal notice of claim, because (a) contractual notice provision was informally satisfied once the owner had actual notice of the operative facts giving rise to construction delays and contractor's acceleration claims and (b) owner failed to demonstrate any prejudice resulting from contractor's failure to submit a formal notice of their claim.); *accord Connelly Constr. Corp. v. Travelers 129 Cas. & Sur. Co. of Am.*, No. 16-cv-555, 2018 WL 2091417, at \*9 (E.D. Pa. Jan. 2, 2018) (“[A]ctual notice will satisfy a contract's notice provisions only if the defendant suffered no prejudice by the plaintiff's failure to submit a written claim.”) (internal quotation marks omitted).
15. With respect to the issue of prejudice, in public contracts, the public entity has the burden to establish prejudice from the contractor's failure to strictly comply with the express notice particulars. *See, e.g., John Spearly Constr., Inc. v. Penns Valley Area Sch. Dist.*, 121 A.3d 593, 607 (Pa. Commw. Ct. 2015) (“[T]he District did not establish any prejudice from the lack of formal notice.”).
16. This realistic approach to contractual notice provisions that has been adopted by Pennsylvania courts extends to quantification of claim provisions as well, especially when the contractor was not able to quantify the impact until later in the project or even until the end of the project. *See James Corp.*, 938 A.2d at 485 (affirming trial court's finding that

contractor's "quantification of its damages could only be accomplished once the project was finished, and financial analysis could disclose the true losses suffered.").

17. The *James Corp.* court further explained that because the school district in that case had actual notice of the delay and proved no prejudice from failure to receive the written claim in 21 days, a failure to strictly comply with the written contract provision about notice would not bar the contractor's claim. 938 A.2d at 486.
18. In this case, the City had actual knowledge that Nolt claimed a delay caused by Bulletin 7, and the City, while doing little more than rotely (to the point of obdurate conduct) refusing to work with Nolt on the matter of an extension and other Nolt-initiated requests, failed to meet its burden to demonstrate that it was prejudiced (or how it could have been prejudiced) by any failure of Nolt to follow any particular contractual provision to the letter.
19. Echoing the expectation of reasonable behavior by contracting parties, StCR § 26(c) states that the contractor "shall be entitled to a reasonable extension of time for unavoidable delays or interference in completion of the Contract caused by: any acts or omissions of the City . . . which occur subsequent to the issuance of the Notice to Proceed and which cause delay in completion of the contract, . . . by changes in the Plans and Technical Specifications. Ex. D-1 at 63.
20. Pursuant to StCR § 26(c), Bulletin 7 was an "omission[ ] of the City," a "change[ ] in the Plans," and a change "in Technical Specifications," which was issued after the issuance of the Notice to Proceed and which caused a material delay in the completion of the Contract.
21. The City's failure to fairly, efficiently, or timely administer the punchlist(s) after substantial completion constituted an "act[ ] or omission[ ]" of the City that prevented Nolt

from completing its work and caused Nolt to incur expenses that need not have been required but for the City's uncooperative handling of punchlist processing and activities.

22. During trial, Nolt established that it was entitled to a 339-calendar-day, compensable extension of time due to these excusable delays. TD3 Tr. at 41, *l.* 17 to pg. 42, *l.* 25.
23. On March 16, 2016, in accordance with StCR 26(e)(1), Nolt placed the City on notice of a delay after issuance of Bulletin 7 and reserved its rights to submit a claim for a time extension upon assessment of the Bulletin 7 impact on the schedule. Ex. P-36.
24. SCR § 26(e)(2) and (3) do not require a "time impact analysis" but only that the contractor make a request in writing showing the impact on the critical path and the ultimate completion date within 10 days after the conclusion of the delay. TD3 Tr. at 50, *l.* 10–12; TD7 Tr. at 131, *l.* 16–21; Ex. D-1 at 64.
25. The City presented no contemporaneous evidence that the City ever informed Nolt (until litigation was underway) that it would not accept its reservation of rights.
26. The City was required to prove prejudice caused by a failure to comply. *See John Spearly*, 121 A.3d at 607; *James Corp*, 938 A.2d at 485.
27. The City was in possession of all "operative facts" pertaining to the amount of the time that Bulletin 7 would delay the Project. Among the reasons for the conclusion that the City's position with respect to the appropriateness of a time extension is the fact that almost five (5) months after the issuance of the Notice to Proceed, the City materially redesigned the steel and roof work that would logically cause a delay to Nolt vis-à-vis the completion date of the Project.
28. The City has not met its burden of proof to establish that it was prejudiced by Nolt failing to submit a time impact analysis within ten days of the issuance of Bulletin 7.

29. The City has not proven that receipt of a time impact analysis, even though not required by StCR § 26(e), within 10 days of issuance of Bulletin 7 would have changed the City's decision with respect to the cause of delays on the Project.
30. Because the City was on notice of the delay, could have quantified the delay by simply reviewing the Approved Baseline Schedule, and did not prove that receipt of a time impact analysis within ten days would have resulted in any different conduct by the City, the City cannot reasonably invoke a demand for strict compliance with SCR ¶ 26(e) as a defense to Nolt's claim for a time extension related to Bulletin 7.
31. Pursuant to *James*, a contractor should not be barred from recovery for failing to comply with a quantification provision, when the contractor was not able to quantify the impact until later in project or until the end of the project. 938 A.2d at 485.
32. The earliest the Bulletin 7 delay "concluded" was at the substantial completion date in December 2016. TD1 Tr. at 129, *l.* 17–21; TD3 Tr. at 28, *l.* 13–20.
33. On June 5, 2017, after it was able to quantify all delays on the Project, Nolt submitted to the City a time impact analysis. TD7 Tr. at 133, *l.* 17–25; Ex. P-142.
34. The City identified no prejudice it allegedly suffered due to its receipt of a time impact analysis on June 5, 2017 and offered no persuasive evidence to support the City's argument that it would have altered its course of conduct had the City requested and received the time impact analysis any earlier than when it was received on June 5, 2017.
35. The June 5, 2017 time impact analysis not unreasonably concluded that Nolt incurred a 153-calendar day delay as a result of the issuance of Bulletin 7. TD7 Tr. at 134, 7-15.
36. Despite submission of the June 5, 2017 analysis, the City maintained that it bore no responsibility for delaying Nolt's progress on the Project by issuing Bulletin 7, and had

maintained the position it asserted since March 2016 that Nolt alone was responsible for all delays incurred on the Project.

**III. The City breached the Contract by not paying the remaining money due**

37. It is undisputed that Nolt completed the work required by the Contract.

38. Nolt submitted periodic Payment Applications 16, 17 and 18 for work completed as of the date of the respective applications.

39. Nolt submitted Payment Application No. 19 for retainage withheld by the owner.

40. There is no dispute that Nolt's unpaid contract balance totals \$1,087,776.53. Supp. Stip., July, 14, 2021 at 2, ¶ 15.

41. Nolt was entitled to an extension of time, and the owner had no reasonable reason to refuse to issue payment to Nolt.

42. The failure to pay the contract balance constituted a breach of contract.

43. The Prompt Payment Act, 62 Pa. C.S.A. §§ 3901–3942 (the “PPA”), “imposes certain obligations on governmental agencies and other contracting parties for construction contracts covered by the act.” *G.R. Sponaugle & Sons, Inc. v. Hunt Constr. Grp, Inc.*, 366 F. Supp. 2d. 236, 245 (M.D. Pa. 2004).

44. The Contract at issue in the case incorporated the payment provisions of the PPA in StCR § 54(b) and StCR § 55. *See* Ex. D-1 at 77 (“The City shall pay the Contract according to the provisions of 62 Pa. C.S.A. §§ 3931 et seq., Subchapter D, Prompt Payment Schedules....”); *id.* at 78 (“Act 57 of 1998, 62 Pa. C.S. § 3921 shall govern the withholding of retainage on the Contract.”).

45. “To bring forth a claim for payment under the PPA, a contractor must show: (1) it completed work for a government agency as defined in the PPA; (2) the parties entered

into a covered contract for a value greater than \$50,000; (3) the government agency entered the contract through a competitive bidding process; and (4) said government agency failed to pay the contractor for its performance in accordance with the terms of the contract.”

*Charlestown Twp. v. U.S. Sur. Co.*, No. 17-cv-5469, 2020 WL 618552, at \*2 (E.D. Pa. Feb. 7, 2020) (citing 62 Pa. C.S.A. §§ 3901(a), 3902, 3934(a)).

46. By statute, “[a] government agency may only withhold payment from the contractor when the agency identifies ‘deficiency items’ in the contractor’s performance, which must be in conformity with the terms of the contract between the parties.” *Charlestown Twp.*, 2020 WL 618552, at \*2; *see also* 62 Pa. C.S.A. § 3934(a).

47. By statute, the government agency must notify the contractor of the deficiency item within the time period provided by the Contract, or 15 calendar days from when the Payment Application was received. 62 Pa. C.S.A. § 3934.

48. There is no evidence that the City provided the statutorily required written notice of a “deficiency item” in Nolt’s performance within 15 days of Nolt’s submissions of its payment applications (or within a reasonable time frame of that 15-day period).

49. The City violated the Prompt Payment Act.

50. By statute, a public entity owner must pay interest of 10% per annum on withheld final payment sums where the contract, as here, includes retainage. 62 Pa. C.S.A. §§ 3932(c), 3941(b); StCR § 55. If the owner’s withholding was in “bad faith,” or “arbitrary or vexatious,” as here, the owner must also pay a penalty of 1% per month on withheld final payment sums. 62 Pa. C.S.A. § 3935(a).

51. By statute and under its Contract, Nolt is entitled to receive interest of 10% per annum, and a penalty of 1% per month on each unpaid Payment Application.

**IV. Nolt wrongly had to replace undamaged portions of the roof at the direction of the City's agent**

52. To form a principal-agent relationship in Pennsylvania, “[t]he general rule is that [the] relationship requires no special formalities. It need not be in writing and it arises whenever a person authorizes another expressly or by implication, i.e., by words and/or by conduct, to act as his agent.” *Falconer v. Mazess*, 168 A.2d 558, 560 (Pa. 1961).
53. Pennsylvania courts have explained that “[a]n agency relationship may be created by any of the following: (1) express authority, (2) implied authority, (3) apparent authority, and/or (4) authority by estoppel.” *Walton v. Johnson*, 66 A.3d 782, 786 (Pa. Super. Ct. 2013).
54. Pennsylvania courts have also explained that express authority “exists where the principal deliberately and specifically grants authority to the agent as to certain matters.” *Walton*, 66 A.3d at 786.
55. Implied authority “exists in situations where the agent's actions are “proper, usual and necessary” to carry out express agency.” *Walton*, 66 A.3d at 786 (quoting *Passarelli v. Shields*, 156 A.2d 343 (1959)).
56. “An agency relationship may be found even where the putative principal merely controls the result, and the agent tenders its performance to achieve that result by means within its own discretion.” *Exact Precision, Inc. v. Accura Zeisel Mach. Corp.*, No. 98-cv-4168, 1999 WL 1197899, at \*2 (E.D. Pa. Dec. 15, 1999) (citing *Basile v. H & R Block, Inc.*, 729 A.2d 574, 580–81 (Pa. Super. Ct. 1999)).
57. Keating had express authority from the City to “act on its behalf” and to “accept and reject work.” Ex. D-1 at 99.

58. With the City's consent, Keating appointed Mr. Pizzo as its agent to fulfill its express authority to "accept or reject work."<sup>4</sup>
59. Mr. Pizzo was an implied agent of the City and was given the authority to reject work.
60. The City's agent Mr. Pinto gave Keating authority to instruct Nolt that Bulletin 7 should be immediately incorporated into shop drawings. Ex. P-44; TD6 Tr. at 62, *l.* 2-12.
61. Mr. Pizzo was the only City or Keating representative on the roof during the replacement work, and admitted that he solely decided if an area was wet or dry. TD6 Tr. at 126, *l.* 20 to pg. 127, *l.* 1; TD9 Tr. at 89, *l.* 19 to pg. 90, *l.* 15.
62. Even if an agency relationship between the City and Mr. Pizzo was not express or implied, "[a]pparent agency exists where the principal, by word or conduct, causes people with whom the alleged agent deals to believe that the principal has granted the agent authority to act." *Walton*, 66 A.3d at 786.
63. An agency relationship exists between the City and Mr. Pizzo both through apparent agency and agency by estoppel.
64. "[A]uthority by estoppel occurs when the principal fails to take reasonable steps to disavow the third party of their belief that the purported agent was authorized to act on behalf of the principal." *Walton*, 66 A.3d at 786 (citing *Turnway Corp. v. Soffer*, 336 A.2d 871 (Pa. 1975)); *see also Reifsnyder v. Dougherty*, 152 A. 98, 100 (Pa. 1930).
65. During the time of the roof replacement, the City charged against Nolt the sum of \$10,000 per day in liquidated damages. TD2 Tr. at 66, *l.* 5-7.

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<sup>4</sup> The evidence at trial supports the conclusion that Mr. Pizzo directed Nolt to remove over 50% of the newly installed roof, even though the infrared reports only showed minimal areas that were confirmed as having suspicious moisture damage. By directing Nolt to remove and repair additional, not problematic areas of roof, Mr. Pizzo rejected completed work under StCR § 65.



66. And in December 2016, Nolt was told that if it did not comply with Mr. Pizzo's field directives, he would (or could) issue non-compliance reports.
67. Because Nolt reasonably followed the direction given by Mr. Pizzo, Nolt was directed by the City to remove and replace portions of roof that were not proven (then or at trial) to be damaged.
68. StCR § 65 provides that in the event work is found to be in accordance with the Contract Documents, the City is to reimburse Nolt for the costs of examination and replacement. Ex. D-1 at 82.
69. The City failed to establish that any roof areas outside of the areas identified in the roof scans were moisture damaged, defective, or reasonably required replacement for any other reason beyond the demands of the City and its agent, Mr. Pizzo.
70. The City failed to establish that an act or omission by Nolt was the cause for any moisture damage.
71. The City presented no evidence of any technical specification, plan, detail or other Contract Documents that Nolt violated while installing the roof.
72. Mr. Pizzo directed Nolt to remove and replace 31,114.76 SF (32,835 SF minus 1720.24 SF) of newly installed roofing without reasonably establishing that these areas were damaged or otherwise required replacement. Ex. PD-5.
73. Nolt is entitled to the \$786,163.48 spent removing and replacing areas of roof at Mr. Pizzo's direction that were never determined to be wet.
74. The City failed to compensate Nolt for the costs of the investigation that revealed no non-conforming work as was required by SCR § 65, and the City's non-payment constitutes a breach of contract.

75. Nolt is also entitled to the \$21,142.05 spent performing test cuts in September 2017 and February 2018.

**V. The City underpaid Nolt for extra work**

76. StCR § 48(b) provides that while the City can increase or change work, the Contractor is entitled to an adjustment in compensation. Ex. D-1 at 74.

77. StCR § 50, “Disputed Change Orders,” provides that in the event the City and the Contractor “cannot agree upon a price within a reasonable time . . . the Project Manager may direct the Contractor to perform complete the extra or additional work . . .” Ex. D-1 at 75.

78. Throughout the Project, Nolt advised the City of its disagreement with unilateral change orders issued by the City.

79. On the face of the change order CCD-1, Nolt reserved its rights to pursue the omitted costs. Ex. P-268 at 9.

80. Nolt’s Mr. O’Brien informed Mr. Pinto that with respect to Change Order Nos. 18 through 22 (Ex. P-271; Ex. P-272; Ex. P-273) that Nolt was “not in agreement,” “would not be signing the change orders” but instead would “hold them to the end of the Project and hopefully [ ] amicably resolve them then,” and that Nolt reserved its right to pursue a claim for costs.” Ex. P-271 at 17–18.

81. After completion of the work, StCR § 50 instructs the Contractor to provide “the nature and precise amount of compensation sought for the work, as well as copies of all force account time sheets and records compiled by the Contractor for the work.” Ex. D-1 at 75.

82. Nolt submitted its costs for disputed change orders and other denied extra work claims in a claim at the end of the Project. Ex. D-668; TD6 Tr. at 24, *l.* 22 to pg. 25, *l.* 1.

83. Because the failure to provide force accounts is not a requirement to payment of Nolt's extra work claims, Nolt complied with StCR § 50 by submitting "records compiled by the Contractor for the work."
84. Nolt's extra work claims were proven with reasonable certainty because they were supported with bluebook sheets for equipment costs, purchase orders for materials, invoices from subcontractors, and time and material sheets from Nolt and its subcontractors. Exs. P-268 to P-274.
85. Nolt seeks \$2,152.15 for the extra equipment and superintendent and safety supervisor it had on-site during the asbestos abatement work the City added on in Change Order No. 1. For the rented equipment, the City reimbursed Nolt for nine hours, which is the total time that Mr. Brasberger, Keating's field supervisor, believed that the equipment had been used. Ex. P-268 at 5. But Mr. O'Brien explained that the equipment had been used for "at minimum" 20.25 hours. *Id.* Nolt is thus entitled to \$294.19 in equipment costs.
86. During the project, Nolt had to have a superintendent and "qualified safety representative" on site "at all times." SpCR § 1.2(E), (N). For the asbestos abatement, Nolt used the same superintendent and safety supervisor as for the rest of the project. Those management salaries were fixed administrative costs, and those personnel would have been on site, abatement or not. Confirming this, StCR § 52(a)(1) contemplates that, for extra work, Nolt would be paid for additional costs, like the "[w]ages of forepersons, equipment operators and ... laborers," but not overhead expenses, like the salaries of management employees. Nolt is thus not entitled to \$1,858.01 for the cost of having its superintendent and safety supervisor on site.

87. Once the roof was demolished, Nolt found additional crickets that had not been planned for in the original design. Nolt removed one of the crickets, a total of 304.5 square feet, to install the vapor barrier and to ensure that Nolt could properly prepare to cut the concrete deck. Ex. D-671 at 2. The Contract set a unit price of \$10 per square foot for removing crickets. *Id.* at 37. Nolt is thus entitled to \$3,045 for the cost of removing the cricket.
88. Nolt installed two roof drains because the roof, as designed, did not permit water to drain properly. Nolt is due the \$50,077.82 spent installing the extra roof drains.
89. Nolt is entitled to full payment for its actual costs from three change orders that the City reduced, for a total of \$16,882.07. Nolt's extra work claims were proven with reasonable certainty as they were supported with bluebook sheets for equipment costs, purchase orders for materials, invoices from subcontractors, and time and material sheets from Nolt and its subcontractors. Exs. P-268 to P-274.
90. Nolt is entitled to \$2,203 for additional work resulting from an unforeseen condition. Earlier, the City had agreed to pay this, so long as Nolt provided proper documentation. Def.'s Ex. 671, at 6. The City has since "located" that documentation, and so "no longer disputes this claim." Doc. No. 105 ¶ 249.

#### **VI. The City constructively instructed Nolt to accelerate**

91. "Acceleration occurs when a contractor speeds up the pace of its work, faster than the rate prescribed in the original contract." *Dep't of Transp. v. Anjo Constr. Co.*, 666 A.2d 753, 757 (Pa. Commw. Ct. 1995).
92. "A contractor may recover for the increased costs incurred as a result of accelerating its performance, when (1) its own delays in performance are excusable, (2) the contractor was ordered to accelerate, and (3) the contractor did so and sustained extra costs." *Anjo*, 666

A.2d at 757 (citing *Norair Eng'g Co. v. United States*, 666 F.2d 546, 548 (Ct. Cl. 1981));

But Nolt is not contractually authorized to collect a 20% overhead. *See* SpCR § 1.2(F)(4).

93. Similarly, constructive acceleration may arise where an owner affirmatively insists that a contractor complete their work by the original contract completion date without regard to excusable delays. *See* Bruner and O'Connor at § 15:98; *see also Ace Constructors, Inc. v. United States*, 70 Fed. Cl. 253, 281 (Fed. Cl. 2006) (“[owner’s] refusal to grant an extension while keeping the original deadlines in place effectively constituted an order for constructive acceleration”), *aff’d*, 499 F.3d 1357 (Fed. Cir. 2007); TD5 Tr. at 8, *l.* 11–15.

94. Pennsylvania law is in accord: an owner’s refusal to grant a contractor’s request for a time extension can be treated as a constructive acceleration of the contractor’s work. *See Anjo*, 666 A.2d at 757 (“A constructive acceleration order may exist...when [the owner] expresses concern about lagging progress.”).

95. Nolt informed the City that because an extension was not granted, it would work overtime and on weekends. Ex. P-101 at 14.

96. Although there is reason to believe that Nolt (or its subcontractors) likely contributed in some measure to the need to accelerate, the City did not provide any factual basis on which to parse the responsibility between the City and Nolt. Therefore, the City constructively accelerated the Project and Nolt is entitled to be paid for the overtime and premium costs incurred of \$44,887.54.

97. In the construction industry, if one party is at fault for a delay, the other party can seek compensation so long as the contract does not forbid it. *James Corp.*, 938 A.2d at 484. Even if an owner is not at fault for the delays, or if the contract forbids compensation, the

owner might still be liable for compensation if the contractor is faced with an unknown and unanticipated site condition. *Id.*

98. Even if a construction contract includes a no-damage-for-delay clause, the owner cannot enforce that exculpatory clause if the owner positively interferes with a contractor's performance of its contract work or neglects to perform a necessary prerequisite to the contractor's work. *See Henry Shenk Co. v. Erie Cty.*, 178 A. 662, 665 (Pa. 1935).

99. The City claims that Nolt waived any claim for compensation for the City's delay. Under the Contract, a Change Order is a "full and complete waiver" of all "schedule delay costs." StCR § 49(c). And though Nolt indicated on Change Order 8 that it reserved the right to pursue "an appropriate time extension" for Bulletin 7, Nolt never explicitly said that it reserved the right to seek compensation for the delay. *See* Ex. P-73 at 3.

100. Here, the evidence showed that the City failed to finalize the structural steel design until it issued Bulletin 7 on March 7, 2016.

101. The City failed to finalize the control points and grid until it issued Bulletin 7.

102. Nolt had no design responsibility on this Project but was required to build according to the construction documents issued by Ballinger.

103. The City's failures to finalize its design until March 7, 2016 equated to a failure by the City to "perform a necessary prerequisite to the contractor's work." *Shenk*, 178 A. at 665.

104. Nolt claims it is entitled to recover \$488,422.96 in extended general conditions costs, described generally as "costs for supervision, equipment, officer trailers, portable toilets, project managers, safety, and scheduling" from December 2016 until February 2018. However, Nolt was still performing contract work at that time, *see, e.g.*, Ex. P-142,

and Nolt has not parsed these additional costs to explain which portions were the City's "fault" and which were fairly Nolt's (or its subcontractor's) responsibility without regard to the City's conduct.

**VII. Nolt proved its damages with reasonable certainty**

105. Pennsylvania law requires that a party seeking damages for breach of contract prove such damages with "reasonable certainty." *Exton Drive-In, Inc. v. Home Indem. Co.*, 261 A.2d 319, 324 (Pa. 1969).
106. Accordingly, in assessing an entitlement to damages, district courts applying Pennsylvania law must apply the reasonable certainty standard of proof. *See ATACS Corp. v. Trans World Commc'ns, Inc.*, 155 F.3d 659, 670 (3d Cir. 1998) ("[T]he district court correctly applied Pennsylvania law in attempting to ascertain damages with reasonable certainty.").
107. Thus, the reasonable certainty standard "embraces a rough calculation that is not too speculative, vague or contingent upon some unknown factor," yet its application "does not preclude an award of damages because of some uncertainty as to the precise amount of damages incurred." *ATACS Corp.*, 155 F.3d at 669–70 (internal quotations and citations omitted).
108. Except as to the additional General Conditions Costs discussed in paragraph 91 *supra* and the three change orders, Nolt's damages generally are supported by contemporaneous project records, and other reliable business records and causal explanations. Ex. P-268 at 278.
109. The Court concludes that Nolt has sufficiently proven its entitlement to the following:

- a. \$1,087,776.53 for the balance of the contract, plus 10% in interest per year plus 1% in interest per month.<sup>5</sup>
- b. \$44,887.54 for acceleration costs
- c. \$786,163.48 for roof replacement costs
- d. \$21,141.98 for investigation costs
- e. \$74,654.23 for extra work

**IX. The City is not entitled to damages from Nolt**

110. Even if the Court had not found that the City breached its contractual duties to Nolt, the Court would deny the City recovery of its claimed damages for the following reasons.

111. For the damages claimed in its counterclaim for breach of contract, the City has the burden to prove that it “suffered damages from the breach.” *McShea v. City of Philadelphia*, 995 A.2d 334, 340 (Pa. 2010).

112. The City would be entitled to recover whatever damages it suffered, provided the damages were such that would naturally and ordinarily result from a breach by Nolt, “or the damages were reasonably foreseeable and within the contemplation of the parties at the time of contracting and can be proved with reasonable certainty.” *James Corp.*, 938 A.2d at 497.

113. As discussed in paragraphs 635 and 636 and 645 to 647 *supra*, the City did not and cannot prove that the costs of \$7,805.29 for PECO and Direct Energy and for Workers’ Compensation premiums past December 2016 were “caused” by Nolt’s alleged breach of contract of completing the Project late because the Court finds that Nolt finished by the substantial completion date of December 16, 2021.

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<sup>5</sup> Interest calculations shall be submitted by the parties within the time periods set forth in the accompanying order.



114. StCR § 59 provides a mutual release and waiver between Nolt and the City of “any and all claims against each other for consequential damages arising out of or related to the Contract and the work performed thereunder.” Ex. D-1 at 80.
115. By agreeing to waive consequential damages, the City presumably understood that it could not seek, as damages for breach by Nolt, increased costs arising from “agreements” it entered into with other parties. *Ebasco Servs., Inc. v. Pa. Power & Light Co.*, 460 F. Supp. 163, 216–17 & n. 62 (E.D. Pa. 1978).
116. The City’s costs to pay Keating, Ballinger, Graham, Talson and PALM are damages arising from agreements with third parties. Supp. Stip, July, 14, 2021 at 7-9.
117. No evidence was presented to show how Nolt could have reasonably contemplated these foregoing costs without being provided any particular information pertaining to these parties’ respective agreements with the City.
118. The City’s damages related to Talson, PALM, Keating, Graham and Ballinger are consequential and unrecoverable.
119. Pennsylvania law requires that a party seeking damages for breach of contract prove such damages with “reasonable certainty,” and to “a fair degree of probability, establish a basis for the assessment of damages.” *Bd. of Trs, Roofers Local No. 30 Combined Welfare Fund v. Int’l Fidelity Ins. Co.*, 63 F. Supp. 3d 459, 471 (E.D. Pa. 2014) (internal quotation marks omitted); *see also ATACS Corp.*, 155 F.3d at 669–70.
120. The City did not prove its damages for Ballinger, Talson or Palm with reasonable certainty.
121. A plaintiff, such as the City in its counterclaim, has a duty to mitigate damages. *See Vladimirsky v. Sch. Dist. of Philadelphia*, 144 A.3d 986, 1004 (Pa. Commw. Ct. 2016).

122. The City acted unreasonably in its decision to maintain all project specific costs in the fall of 2017 totaling \$166,534.65.
123. The City paid Keating \$61,730 to have Mr. Pizzo onsite full time from October 1, 2017 through the end of December 2017. Ex. D-683. As discussed in paragraphs 605 to 613 *supra*, Mr. Pizzo was not needed on site full-time at that time.
124. The City failed to take reasonable steps to reduce its onsite field presence consistent with normal wind-down for such services.
125. The City failed to mitigate its damages by \$61,730 for retaining Mr. Pizzo onsite through October, November and December 2017.
126. In April 2017, during the period that it was backcharging to Nolt, the City agreed to pay approximately \$120/hr for Mr. Pizzo's time when the City was previously charged approximately \$68/hr, because Mr. Pizzo switched employers to a different Keating subconsultant. TD9 Tr. at 124, *l.* 5–20.
127. Instead of honoring its duty to endeavor to reduce the damages that it would charge to Nolt, it inflated them by agreeing to pay almost double per hour for Mr. Pizzo's services, even though no circumstances changed to justify the increase.
128. This is suggestive of the City's approach to the economic and legal realities of this case and this Project (and the later plans for abandonment of the Project).
129. The costs paid by the City for safety service after Nolt demobilized total approximately \$20,577.50. TD10 Tr. at 13, *l.* 24 to pg. 14, *l.* 5; Ex. D-747.
130. The costs paid by the City for trailer costs after Nolt demobilized total approximately \$2,660.60. TD10 Tr. at 14, *l.* 10–13.

131. For example, and again illustrative of the City's approach in this Project, the City is seeking to backcharge Nolt for 18 hours for the safety representative provided by Graham during the week of October 21, 2017 even though Nolt's certified payrolls show that no workers were onsite that week, TD9 Tr. at 118, *l.* 15 to pg. 119, *l.* 18; Ex. P-279, and even though safety monitoring by a City employee would not have conflicted with any requirements of the OCIP insurers, TD10 Tr. at 25, *l.* 19-23.

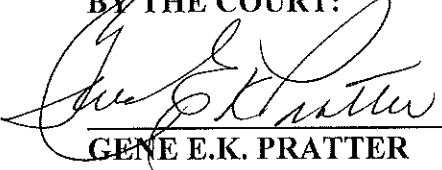
132. The City took no steps to reduce the costs of safety monitoring during the end of 2017, or accept the responsibility.

133. In summary, the City claims it incurred \$1,180,420.12 in costs because Nolt did not finish its Phase II work by December 16, 2016. However, not only was Nolt substantially complete in a timely fashion, but the City's breach of its contractual and good faith duties both caused its own extra expense and damaged Nolt.

#### CONCLUSION

For the reasons set out in this Memorandum, the Court finds in favor of Nolt on its claim and as to the City's counterclaim and awards Nolt in principal \$2,014,623.76. An appropriate order follows.

BY THE COURT:



GENE E.K. PRATTER  
UNITED STATES DISTRICT JUDGE

***D.A. Nolt Inc. v. Philadelphia, 18-cv-4997***  
**Involved Persons and Companies**

Pedro Pinto: the City's Project Manager

James Lowe: the City's Project Director

Ballinger Company: the City's Project Architect

Klein & Hoffman: Ballinger's sub-consultant; the roofing consultant and roofing designer on the Project

Brent Ellman: Ballinger structural engineer for structural steel work

Daniel J. Keating Company: the City's Construction Manager

Craig Hunt: Keating's Project Director

Carl Pizzo: employed by subcontractor to Keating; responsible Project quality control inspector

D.A. Nolt: the general contractor

David Nolt: Nolt's President

Richard O'Brien: Nolt's Vice President

Charles Knauff: employed by Nolt

John Bee, Inc.: the plumbing contractor

Envision Consultants: scheduler engaged by Nolt

JBC Associates: Keating sub-consultant engaged to review Nolt schedule submissions

East Coast Steel: Nolt's initial subcontractor for structural steel

Umoja Erectors, LLC: Nolt structural steel sub-contractor

RCC Fabricators: Nolt's structural steel fabricator (upon Nolt's decision not to proceed with East Coast Steel)

Steve McLaughlin Roofing: the City's first infrared roof consultant

Jersey Infrared: the City's second infrared roof consultant

The Graham Company: provided safety services for the City

Philadelphia Municipal Authority (PMA): City's assignee of the Nolt contract

Siplast: manufacturer of the roof system specified in the Contract Documents

StCR: Standard Contract Requirements

SpCR: Special Contract Requirements

Russell Berner: scheduling expert with Construction Claims Group (“CCG”) hired by Nolt

Peter Vosbikian: scheduling expert with HKA hired by the City

Scott Dolan: employee of Wiss, Janey, Elstner Associates hired by Nolt as roofing expert

James Cohen: hired by City as roofing expert